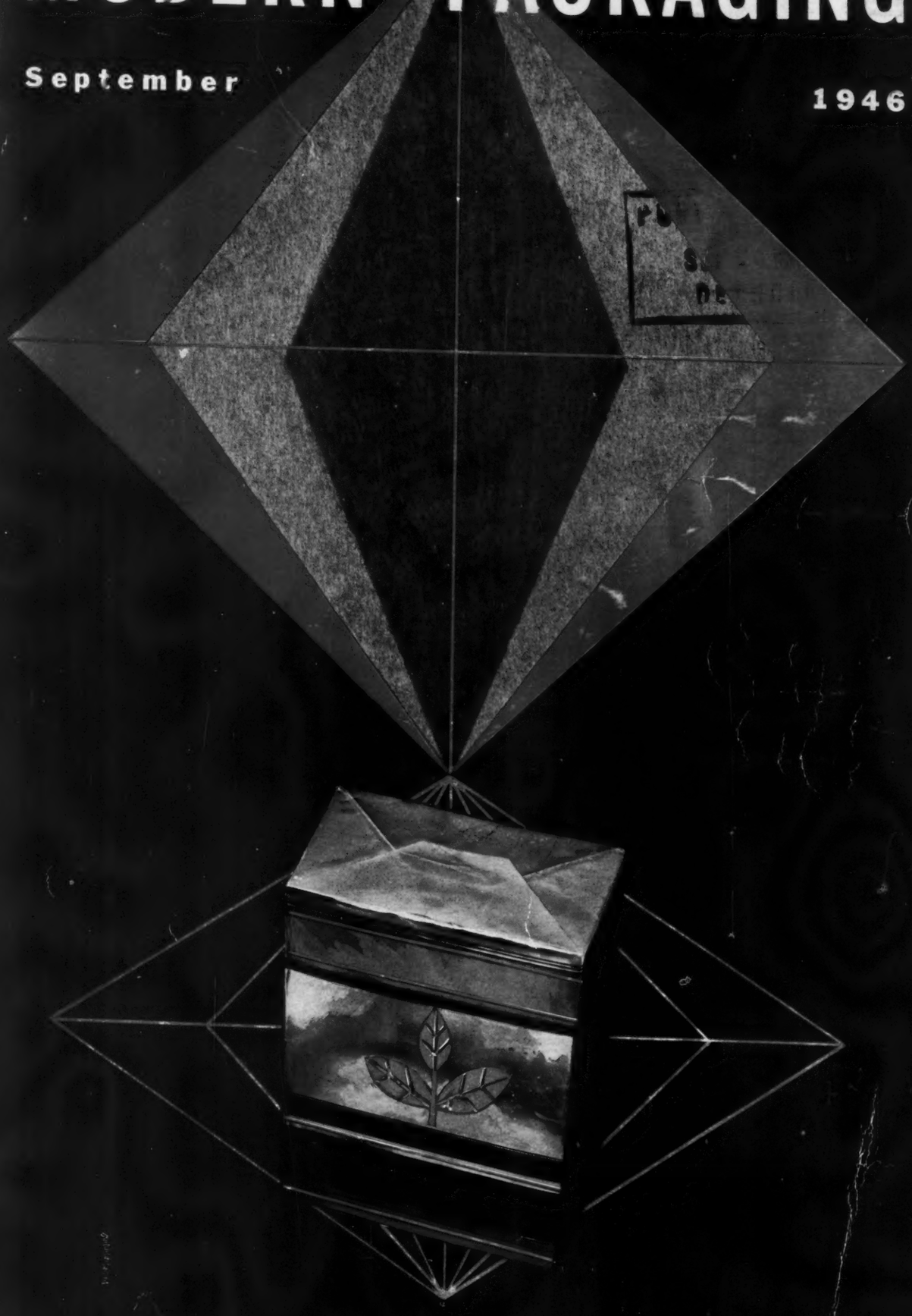
MODERN PACKAGING

September 1946



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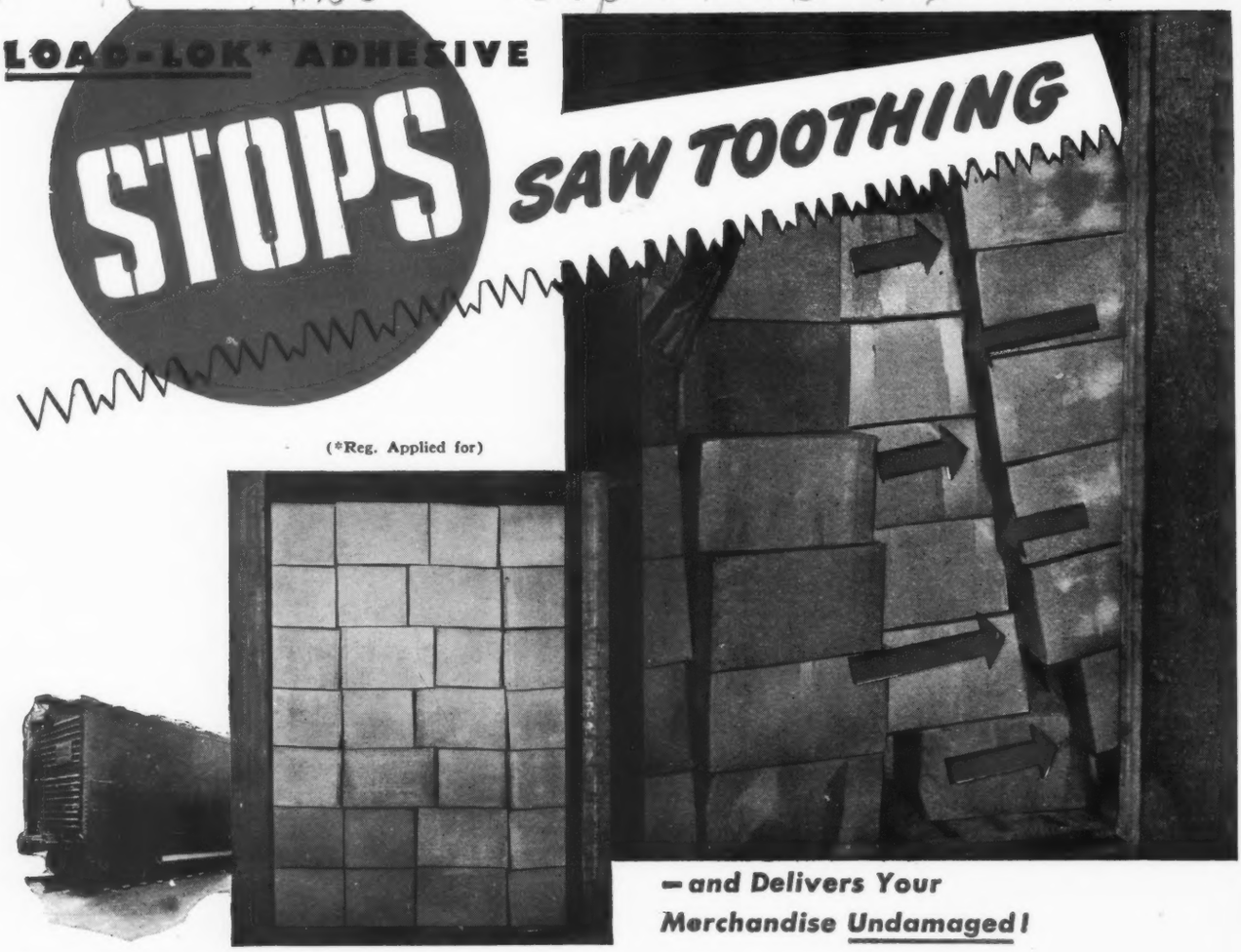
LOAD-LOK* ADHESIVE

STOPS SAW TOOTHING

(*Reg. Applied for)



— and Delivers Your Merchandise Undamaged!

Study the *damaged* shipment photo carefully. Note the jagged carton edges. That's saw-toothing . . . caused by subjecting loose, unglued carloads to vertical oscillation, side sway and car movement shocks. Every carton damages another carton. Here's the proof: 1,116 cartons of canned food shipped from Mississippi to Michigan. Result? 1,102 cartons damaged. Shipment rejected at cold storage warehouse because of mold, odor risks.

Next, study the *undamaged* shipment photo. This shipment was properly unitized with LOAD-LOK Adhesive. Contents: 1,524 cartons of bottled brandy. Distance: California to New Jersey. Outturn Report: "No shifting of lading en transit. Entire load in general good order. No exceptions taken on delivery." That means no breakage . . . clean, safe handling merchandise that'll display well, sell well!

LOAD-LOK is a special National adhesive. It *unitizes* the loading of canned goods, light bulbs, china, bottled goods and all other fragile or crushable materials — in cartons, boxes, bags. Carload and truckload shipments are *unitized* into floating *glued* loads that successfully withstand all shipping stresses and greatly reduce dunnage and bracing costs.

LOAD-LOK is automatically applied in two parallel strips to the bottom surface of each shipping unit . . . which is then lifted off the regular loading conveyor and glued into the *unitized* load. LOAD-LOK has a high shear strength which prevents sidewise or lengthwise shifting of the stowed units. Yet, a single sharp upward blow of the hands, against its low tensile strength, releases each unit for easy unloading. The glue cost is insignificant. And the only equipment required is an inexpensive glue pan installation on your loading conveyor.

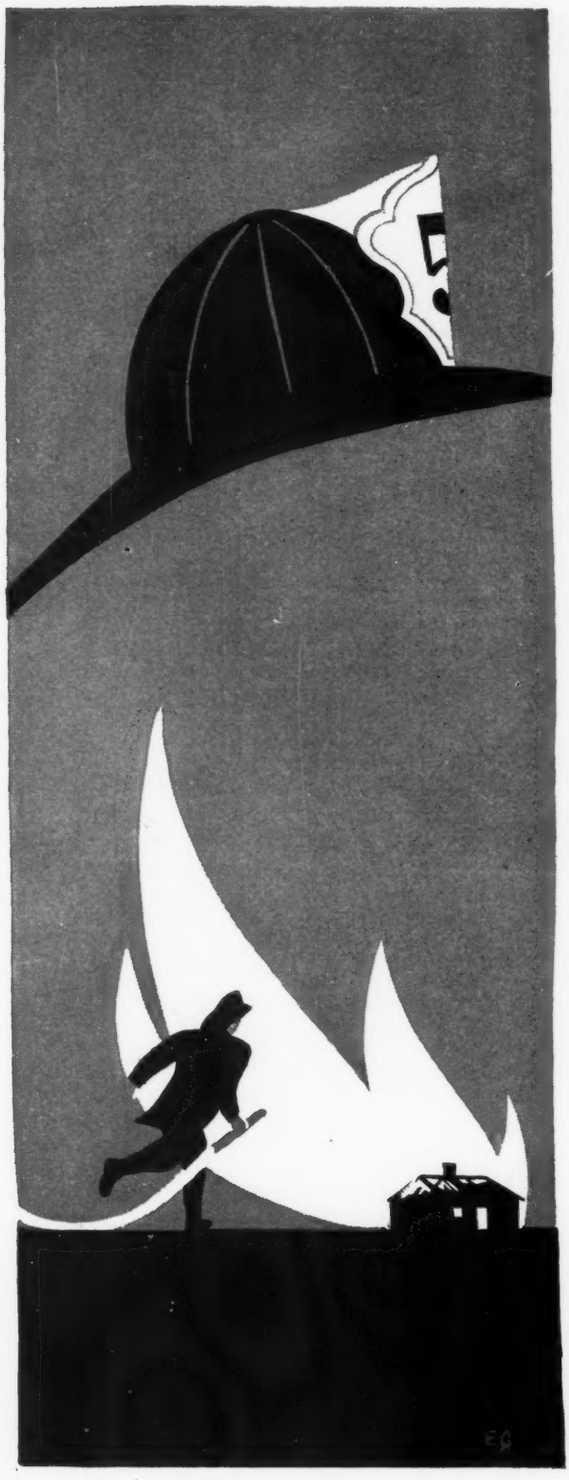
LOAD-LOK has been endorsed by leading carriers. Full details are available in a new handbook: GLUED LOADS. Write for your copy —NOW! Offices: 270 Madison Ave., New York 16; 3641 So. Washtenaw Ave., Chicago 32; 735 Battery St., San Francisco 11; and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto. In England: National Adhesives, Ltd., Slough.

Dunellen Plant

National ADHESIVES

EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL USE

Tech.



E F F I C I E N T

AN EFFICIENT CAP does a top job for both packer and consumer. It is a dependable closure and an easy opener. An efficient cap is the solution to sealing and resealing problems, a sound investment in good packaging that pays big dividends in product protection. The Phoenix C T Cap is at once an effective seal and a positive reseal. It is easy of application, simple of removal. It is a sure-working, right-working cap for packer and consumer . . . *efficient!*

Top wear for glassware

PHOENIX METAL CAP CO.
Chicago 8 and Brooklyn 18

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Member of Audit Bureau of Circulations

MODERN PACKAGING

VOLUME 20 SEPTEMBER 1946 NUMBER 1

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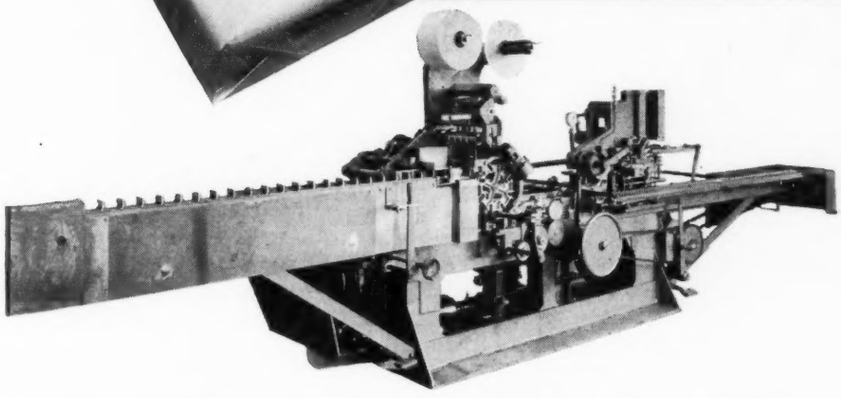
COVER—Lamination is the subject of this month's cover by Peter Piening. The geometric design suggests the combinations of foil, paper and plastics used today in the making of modern protective packaging barriers. The foil package illustrated is a prototype of those discussed in the "Dried Fruit Packaging" article, page 122.

PACKAGE DISTINCTION PLUS PACKAGING PROTECTION



CASHMERE BOUQUET IS VOLUME-PRODUCED ON A COMBINATION REDINGTON WRAPPING-AND-CARTONING MACHINE

Cashmere Bouquet has long been a leader among fine toilet soaps. Colgate-Palmolive-Peet Co. wanted a distinctive package that would (1) preserve the perfumed scent (2) protect the bar against marring (3) be outstanding in design and appearance, in keeping with the superb quality of the product itself.

All three objectives were achieved with high-speed combination Redington cartoning machines that not only wrap the bar but also make up and fill the round edge carton. The operation is simple:

Bars of Cashmere Bouquet are fed in pockets of the conveyor. A wax paper wrapper is cut from roll and a bar is neatly wrapped. IMPORTANT!—all precautions are taken to prevent scratches or other marring of the soap. Next, a die-cut scored carton blank is magazine-fed . . . folded endwise over a mandrel and formed through guides to produce the round cornered carton that is open on one end only. Seams on both sides are glued down. Then this carton is transferred to filling position, the wrapped bar is inserted, and end flaps are folded down and glued.

A number of these same units have been built; additional units are under construction, with new features and improvements.

It's another example of Redington's ability to produce unusual machines to meet unusual merchandising requirements. Another reason why a large battery of Redington machines packages so many famous Colgate products, among them, tooth paste, shaving cream, toilet soap, laundry soap, bottled items and tooth powder.

Yes, more than ever, production executives are saying, "If it's packaging, try Redington first."

F. B. REDINGTON CO. (Est. 1897), 110-112 So. Sangamon St., Chicago 7, Illinois

FOR CARTONING • WRAPPING • SPECIAL PACKAGING

REDINGTON
PACKAGING MACHINES

Does your cork sell as well as seal?

LEADING PACKAGERS know that a cork which comes out quickly and cleanly creates a first impression of quality. It's a favorable impression that customers carry over into their judgment of the product itself, one that builds satisfaction and repeat sales.

That's why manufacturers have been buying top-quality corks from Armstrong for the past 86 years. They provide reliable protection for your product—seal and re-seal your package with complete dependability.

To give your packages extra sales appeal, order your corks from Armstrong. You're sure of getting top-quality corks, skillfully cut and uniformly shaped from the finest imported corkwood, accurately and honestly graded.

For information about Armstrong's Corks—straight, tapered, shell, flange, or Embossed-Top—or any of the many other Armstrong Closures, get in touch with your nearest Armstrong representative. Or write to Armstrong Cork Company, Glass and Closure Division, 5909 Prince Street, Lancaster, Penna.

For favorable "first impressions"

ARMSTRONG'S CORKS and CAPS

He runs his road with GEON-insulated wire

"Rainbow Cable" control wire developed and manufactured by Phalo Plastics Corp., Worcester, Mass.

GEON's *advantages make it ideal insulating material for instrument, home, industrial and utilities wiring*

THE things that Bill used to do with his hands to keep his railroad running—coupling and uncoupling cars, loading and unloading, turning switches—are all done by electricity on the modern American Flyer that huffs and puffs and belches smoke just like its full-sized counterpart.

That calls for connecting wires that are easy to identify, that stand rough usage, that won't crack, get gummy or peel, that will keep fire hazards to a minimum. That's why the A. C. Gilbert Company selected wire with insulation made from GEON. It can be brilliantly colored in a wide range, it wears indefinitely, resists aging and ozone, and is self-extinguishing—won't support combustion.

These and other properties of insulation made from GEON have earned it an important place in every part of the electrical industry. The thinner coating of insulation made possible by GEON's electrical properties permit more conductors per conduit. Resistance to oil and grease, acids, alkalis, moisture, heat, cold, and most other normally destructive factors mean that insulation made from GEON can be used *everywhere.*

The next time you order wire—for manufacturing, home, or industrial wiring—be sure to specify wire insulated with GEON, now being made by leading wire and cable manufacturers. Or for information about special applications please write Department L9, B.F.Goodrich Chemical Co., Rose Building, Cleveland 15, Ohio. In Canada: Kitchener, Ontario.

Geon
Polyvinyl Materials
A TRADE MARK OF B.F. GOODRICH CHEMICAL COMPANY

B. F. Goodrich Chemical Company

A DIVISION OF THE B. F. GOODRICH COMPANY

your product plus

Packages by Milprint

equals **Better Sales**

Join the thousands of famous products successfully selling the quality of their product and their brand name, through expertly designed, carefully created packages by Milprint.

Printed Cellophane, Pliofilm, Glassine, Aluminum Foil, Cellulose Acetate, Vinyl, Lacquer coated and Laminated Papers in all forms, including Sheet Wraps, Rolls, Pouches, or Specialty Bags, Revelation Bread Wraps, Specialty Folding and Window Cartons, Counter Displays, Simplex Pie and Cake Units.

SALES OFFICES IN ALL PRINCIPAL CITIES . . . .

MILPRINT Inc.

PACKAGING CONVERTERS • PRINTERS • LITHOGRAPHERS

plants at Milwaukee, Philadelphia, Los Angeles, San Francisco and Tucson

PACKAGING HEADQUARTERS TO AMERICAN INDUSTRY

THE ROSS WAY IS THE NEW WAY

Part of Ross assembly line.

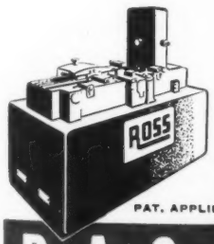
Part of Stockroom with standardized precision parts made to close tolerances.

STANDARDIZED *and* PRECISION BUILT

Ross Packaging Machinery is unique in the industry. Functional streamlining, engineered for precision adjustments, with all parts machined with fixtures and jigs insuring complete interchangeability.

Assembly line production using standard, precision built parts eliminates future replacement problems — eliminates prolonged 'downtime'. The result is the now famous Ross machine, self-oiled, speedy precision dial controls, versatile adjustability, high precision parts.

- PRECISION PARTS
- SELF-OILING
- DIAL CONTROL
- VERSATILE ADJUSTABILITY
- MASTER SPEEDRANGER



PAT. APPLIED FOR

A. H. ROSS *and Co.* LUDLOW • KENTUCKY

PACKAGING MACHINERY

A SUBSIDIARY OF THE ROCKWELL MANUFACTURING COMPANY.

$200.00 *in prizes!*

1st prize	$100.00
2nd prize	50.00
3rd prize	25.00
4th prize	15.00
5th prize	10.00

Instructions:

1. Tear out this page
2. Fill in the answers to our questions
   (All answers will be found in our previous advertisements in this magazine. You may use your own language.)
3. Sign your name, etc.
4. Mail
5. Decide how you'll spend the money
6. Look for your name among the winners in our December ad

The Questions:

What do we call the newest type of coating?

Answer .....

Why is paper printed in rolls cheaper than printing in sheets?

Answer .....

What fluid is used in paper making?

Answer .....

How can you identify "relief" embossing?

Answer .....

Contest closes November 1. Entries will be dated and timed. Awards will be based upon the first correct answers received. You must be engaged in package manufacture to qualify. You can be the boss or the errand boy.

That's all. GET BUSY!

Your Name .....

Address .....

Your Company's Name .....

Address .....

MAIL ENTRY TO

MATTHIAS PAPER CORP.,

165 WEST BERKS STREET,

PHILADELPHIA 22, PA., U. S. A.

PRIMER OF PERFECT PROTECTION

T is for Tobacco

FRESH

that's always mellow, cool and sweet, wherever sold, humidor-sealed in **PLIOFILM**

and for Trout

FROZEN

with that brook-fresh zest long after season's end, freezer-guarded in **PLIOFILM**

Today you can ship fish, oysters and other perishables from coast to coast—they'll get there tasting and looking as though you'd just wrapped them. That's the latest packaging miracle with **PLIOFILM** — Goodyear's transparent moistureproof guardian of goodness. ★ By air or express these products, chill-packed in **PLIOFILM** without ice, arrive still cold and fresh. Or quick-frozen they keep perfectly for months, because **PLIOFILM** prevents dehydration, seals in taste and tang. ★ This same moisture-impenetrability makes **PLIOFILM** the perfect pack for all tobacco products, too. For while **PLIOFILM** permanently seals in natural moisture and aroma, it still permits tobaccos to "breathe" — keeping them fresh and free from mustiness. ★ That's why fruits and vegetables brought from farm to table in **PLIOFILM** are so much fresher and tastier—because it permits this breathing action, essential to safeguarding flavor. **PLIOFILM** is now available for food packaging only. For information, write: Goodyear, Chemical Products Division, Pliofilm Department, Akron 16, Ohio.

Pliofilm

A PRODUCT OF GOODYEAR RESEARCH

GOODYEAR

THE GREATEST NAME IN RUBBER

Pliofilm—T.M. The Goodyear Tire & Rubber Company

DOGS . . . . *that go to the people!*

They're the St. Bernards . . . made famous through the years by their rescue of travelers lost during storms in Alpine passes. Descended from the Roman mastiff, their present name was acquired from the St. Bernard pass in Switzerland where they first appeared about 1660.

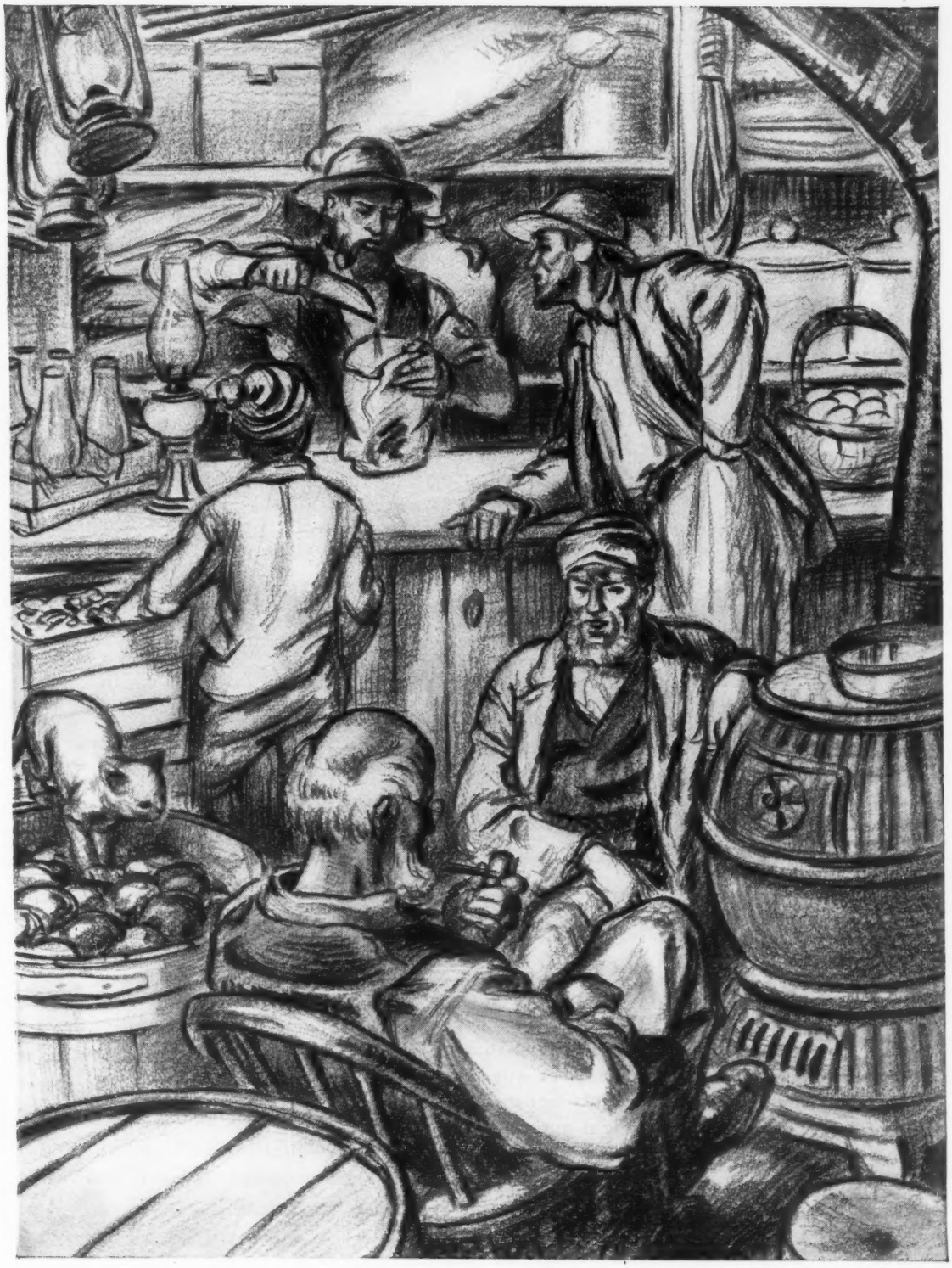
Used extensively by the St. Bernard monks for rescue work, their outstanding performance has been due more to their inherent characteristics than to any planned program of training. A sure sense of direction, even in dense fog and snow, remarkable endurance, and unfailing faithfulness are attributes that make the St. Bernards so well suited to their work. It is only by consistently fine performance like this that confidence is won and held.

Here at Carr-Lowrey we are justifiably proud of the uniformly high quality of our product . . . but we are more proud of the confidence placed in us by buyers of commercial glass containers . . . confidence that is evidenced by their repeat orders over a long period of years.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD. *New York Office:* 500 FIFTH AVE. (18) *Chicago Office:* 1502 MERCHANDISE MART (54)

THIS IS NUMBER NINE IN A SERIES ILLUSTRATING THE HISTORY OF PAPERBOARD AND FOLDING CARTONS



WERE THE "OLD DAYS" REALLY SO GOOD?

The oft-repeated phrase "in the good old days" falls pretty flat in the light of packaging progress. The helter-skelter pattern of the erstwhile general store may seem quaint in retrospect, but the lingering scent of kerosene on crackers and other staples is less desirable and certainly nothing to hanker for. Today, the general store even in the smallest hamlet sells packaged merchandise—mostly in folding cartons. Folding cartons have not only banished the unsanitary cracker barrel but ushered in the era of modern merchandising and mass distribution methods.

UNITED PAPERBOARD COMPANY, INC.
PAPERBOARD FOLDING CARTONS
285 MADISON AVENUE NEW YORK 17, N. Y.

A complete series of these illustrations consisting of 12 pictures and carrying no advertising, will be sent on request.

ALL Old Dominion packages are planned to promote sales and offer protection, but your product viewed through a Visi-Tainer has the ultimate in sales appeal. For true distinction, wherever actual product appearance is a sales factor, Visi-Tainer is a guarantee of increased sales.

This dramatic container affording a clear view of your merchandise assures the purchasing public of the manufacturer's pride in his product. Various decorative designs, shapes and colors heighten the sales value of this attractive package . . . ideal for jewelry, toiletries, leather goods, cosmetics, stationery and similar items.

Give YOUR product new sales appeal with Visi-Tainer.

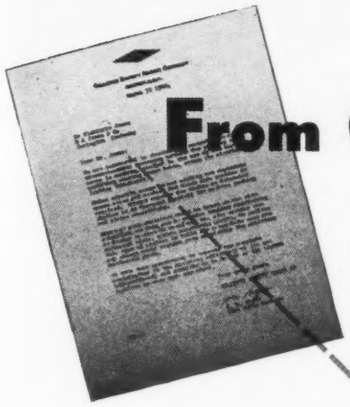
Write today for completely illustrated NEW DESIGN FOLDER, to Old Dominion Box Company, Inc., Dept. 23, Charlotte, North Carolina.

OLD DOMINION *Box Company Inc.*

PLANTS LOCATED THROUGHOUT THE SOUTH
NEW YORK REPRESENTATIVE
228 EAST 45th ST., NEW YORK 17, N. Y.
Phone Mu 2-6492

CHARLOTTE • N. CAROLINA

PRECISION BUILT PAPER BOXES AND PACKAGING MATERIAL



From Gillette to Jones . . .

a commendation for cartoning efficiency

additional [illegible].

We take this opportunity to express our complete satisfaction in the operating efficiency of the new tube cartoner, and consider it to be one of the finest machines to come into our plant.

Very truly yours

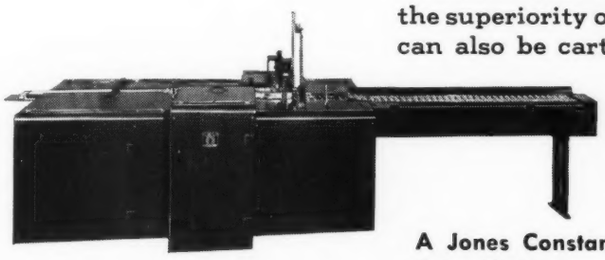
GILLETTE SAFETY RAZOR CO

Efficiency of operation is deserving of praise. Typical of Jones Cartoners is the outstanding performance of the Constant Motion Tube Cartoner recently installed for the Gillette Safety Razor Company.

Tubes of Gillette Shaving Cream are placed in the buckets of the constantly moving conveyor. The machine feeds, folds and inserts a leaflet underneath each bucket. It feeds and opens the carton, gradually inserts the tube and leaflet, closes and tucks both ends of the carton. The no load—no carton device and carton automatic feature insure that no empty or defective cartons pass through the machine.

These operations are performed silently and continuously at speeds of 130 or more tubes per minute. And Gillette's cartoner is quickly converted from one tube size to another in a matter of minutes.

Such unsolicited letters as the one above add futher proof to the superiority of Jones Constant Motion Cartoners. Your product can also be cartoned faster, better and with less cost by Jones. Write for complete information. Your letter, together with a sample of your product, will receive prompt attention.

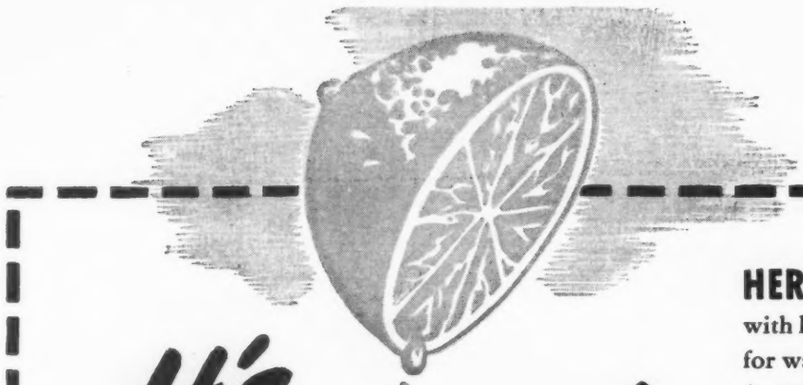


A Jones Constant Motion Tube Cartoner

R. A. JONES & COMPANY, INC.

P. O. Box 485 CINCINNATI, OHIO

THE MAJORITY OF AMERICA'S CARTONED PRODUCTS ARE JONES CARTONED

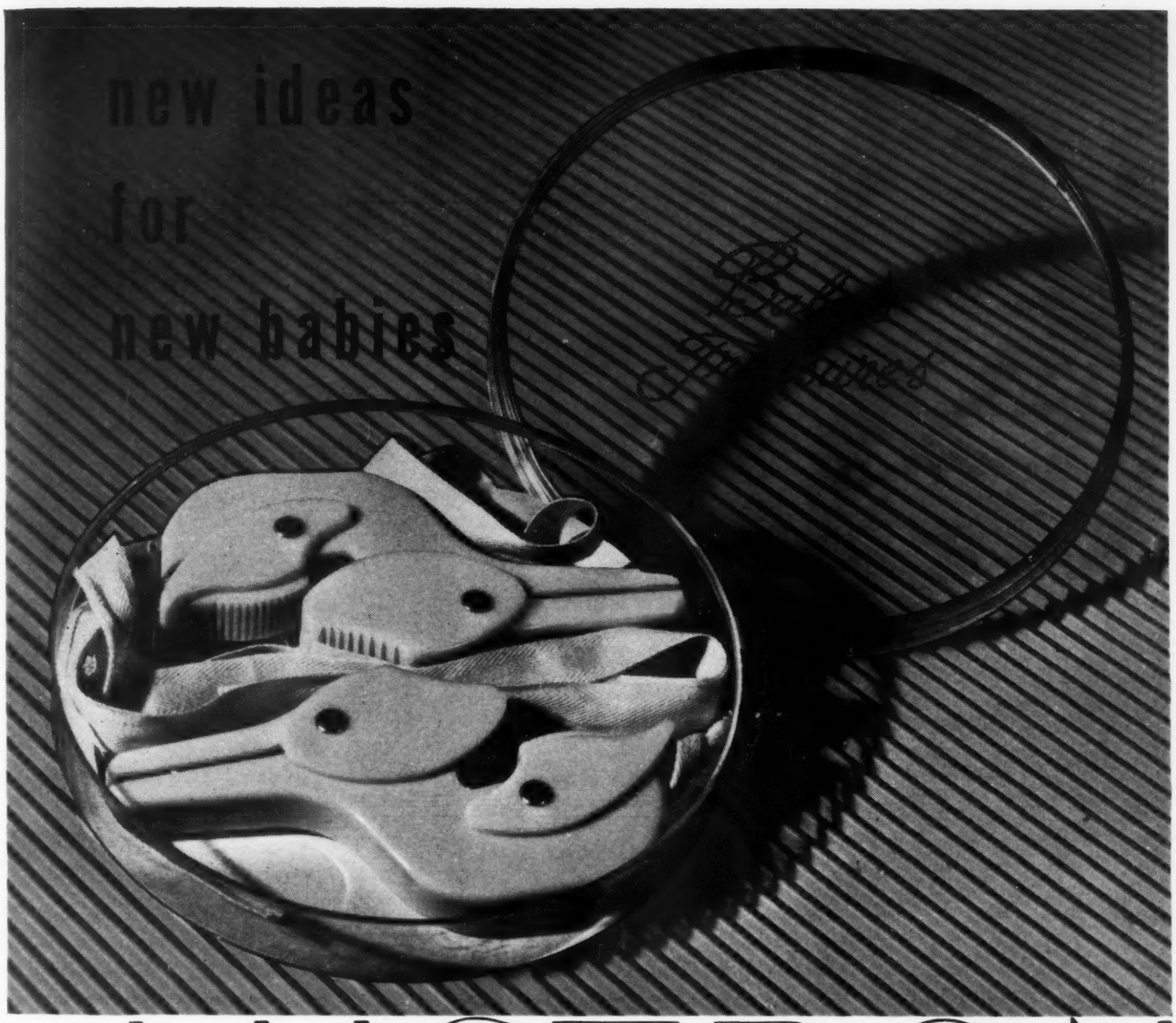


It's Lemonized!

HERE is a mayonnaise that's popular with housewives who are always looking for ways to make tastier versions of their favorite salads. The skillful addition of lemon to Supreme Mayonnaise adds a touch that brings out the finest in salad flavor.

Supreme Foods of Knoxville, Tennessee, Manufacturers of Supreme Lemonized Mayonnaise, have selected Crown Screw Caps as a closure for this product. Only Crown Screw Caps have the patented Deep Hook Thread which grips under the glass thread of the container. They seal tighter with any given amount of application force. Crown Cork & Seal Company, Baltimore 3, Md. *World's Largest Makers of Metal Closures.*

CROWN CLOSURES



...in LUSTRON

Nothing goes into a nursery more appropriately than this beautiful, crystal-clear container molded of Lustron.

Here the manufacturer of clever new baby blanket clips (also of a Monsanto Plastic) elected to present his attractive novelty in *a fittingly attractive package* . . . with extraordinary sales appeal and interesting re-use value.

If you're seeking a new sales propellent, in any field, it will pay you to consider Lustron packaging . . . for full size containers, components, or decorative closures:

1. Full, brilliant color range, including clear, transparent.
2. High dimensional stability
3. Excellent resistance to common acids, alkalies, salts, alcohols . . . and water
4. Freedom from taste and odor
5. Light weight
6. Low cost per pound
7. Ideally suited to mass production in high speed, economical injection molding process. Also may be extruded or blow-molded.

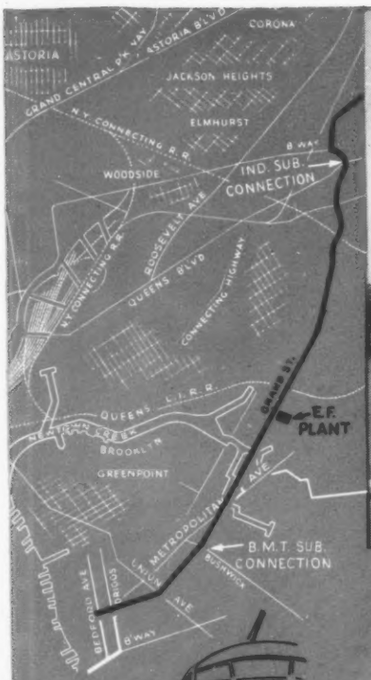
Your box supplier or molder will give you details, or you may write direct for technical data, samples and counsel to: MONSANTO CHEMICAL COMPANY, Springfield 2, Mass. In Canada, Monsanto Ltd., Montreal, Toronto, Vancouver.

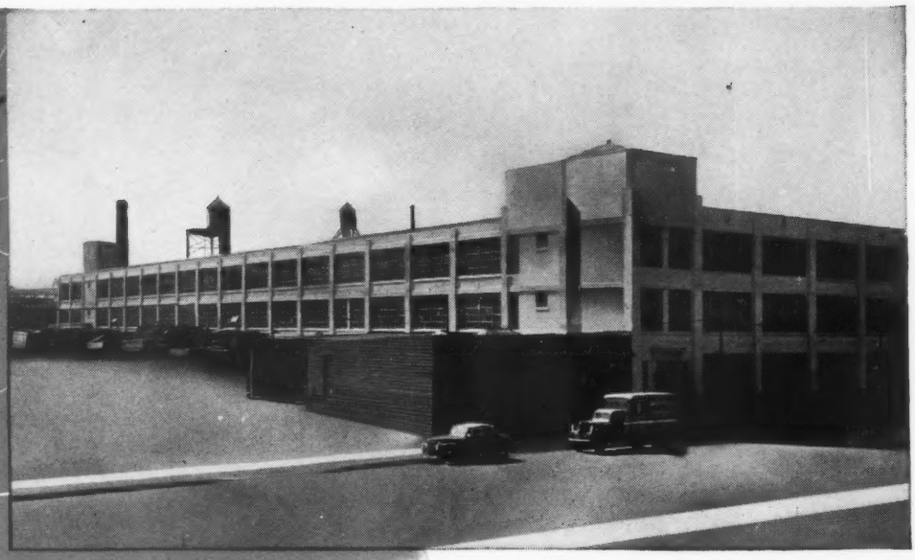
Lustron: Reg. U. S. Pat. Off.

MONSANTO PLASTICS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

VUE-PAK
TRANSPARENT PACKAGING MATERIAL
TRADE MARK

DETROIT PUBLIC LIBRARY





5c fare ... all the way to Flushing!

You never heard of the Grand Avenue carline? . . . *tch, tch!* . . . that Via Appia which binds together like a bent safety pin the borough of Brooklyn which (with Texas) won World War II, the city of homes, churches, the Dodgers and radio gags . . . with the borough of Queens, rich in history, cemeteries and wrong addresses, and more than a million population since 1920!

Opposite Manhattan's Lower East Side, and just north of the Navy Yard, the Grand Ave. line starts at Broadway (Bklyn.), runs north to Grand Street, and describes a sort of great circle course, linking Williamsburg, Bushwick, Greenpoint, Ridgewood in Brooklyn . . . with Maspeth, Woodside, Elmhurst, Jackson Heights and Flushing in Queens.

For a 5c fare, the youth and beauty, the age and experience, the citizens and craftsmen of these two great boroughs can ride to work, home, shop, play, or their final resting place on the Grand Avenue carline. The beautiful women and skilled men who do our mounting, die cutting, hand assembly, pasting, collating, packing, and shipping, arrive conveniently—*Well, what d'you know?*

We almost forgot what this ad was supposed to be about—the new Einson-Freeman finishing plant and warehouse which is, curiously enough, located at 5900 Grand Avenue, almost midway on the Grand Avenue line.

It is three miles away from the main EF plant which still houses office, sales, art, plate making, lithography . . . and from which printed sheets will be trucked to the new plant to be mounted and finished. The main EF plant will not be cluttered up with bulky cardboard and containers, can expand its production departments. Finishing done at Plant 2 will move faster, cost less!

With three floors, each more than an acre of usable space, adjacent rail siding, street level loading at both the first and second floors, lots of parking space, and midway on the G. A. line . . . Plant No. 2 means better production, greater capacity—yes, by gosh, even Progress!

We'd like to have you see Plant No. 2. We'll even take you for a ride on the Grand Avenue carline, where you can see Brooklyn, see the Public, see Life!

Einson-Freeman Co., INC.

EXPANSIVE LITHOGRAPHERS

Starr & Borden Avenues, Long Island City, New York

"Uni-Culture" Garden Inoculation, a product of the Kalo Inoculant Company, is packed in heat-seal packets formed from "Metalam", a combination structure made by The Dobeckmun Company from Alcoa Aluminum Foil and cellulose acetate sheet. The heat-seal packaging machine was built by Stokes & Smith Co.

They had to *Package* bacteria so they wouldn't die

A packet of "Uni-Culture" Garden Inoculation contains millions of beneficial bacteria, alive and kicking, ready to stimulate the growth of such legumes as peas, peanuts, beans, and soybeans.

But these helpful bacteria are mighty hard to please about their traveling conditions. They have to have sufficient moisture from the time they're packed until they're put to work, or they die. And the inner surfaces of the package mustn't produce chemical substances which harm the bacteria or upset their pH equilibrium. *And* the little fellows mustn't be able to break down the package walls.

A heat-seal package formed from a combination sheet of Alcoa Aluminum Foil and cellulose acetate sheet turned the trick for Kalo Inoculant Company. A moisture content of over 30% is maintained for long periods within the packet. And these bacteria and aluminum are the best of friends.

Heat-seal packages formed from Alcoa Aluminum Foil laminated to various plastic films are used for all types of drugs, foods, and chemicals. Hygroscopic tablets and powders stay "as-packed" in these packets. Greasy and oil-base materials cannot seep through aluminum foil.

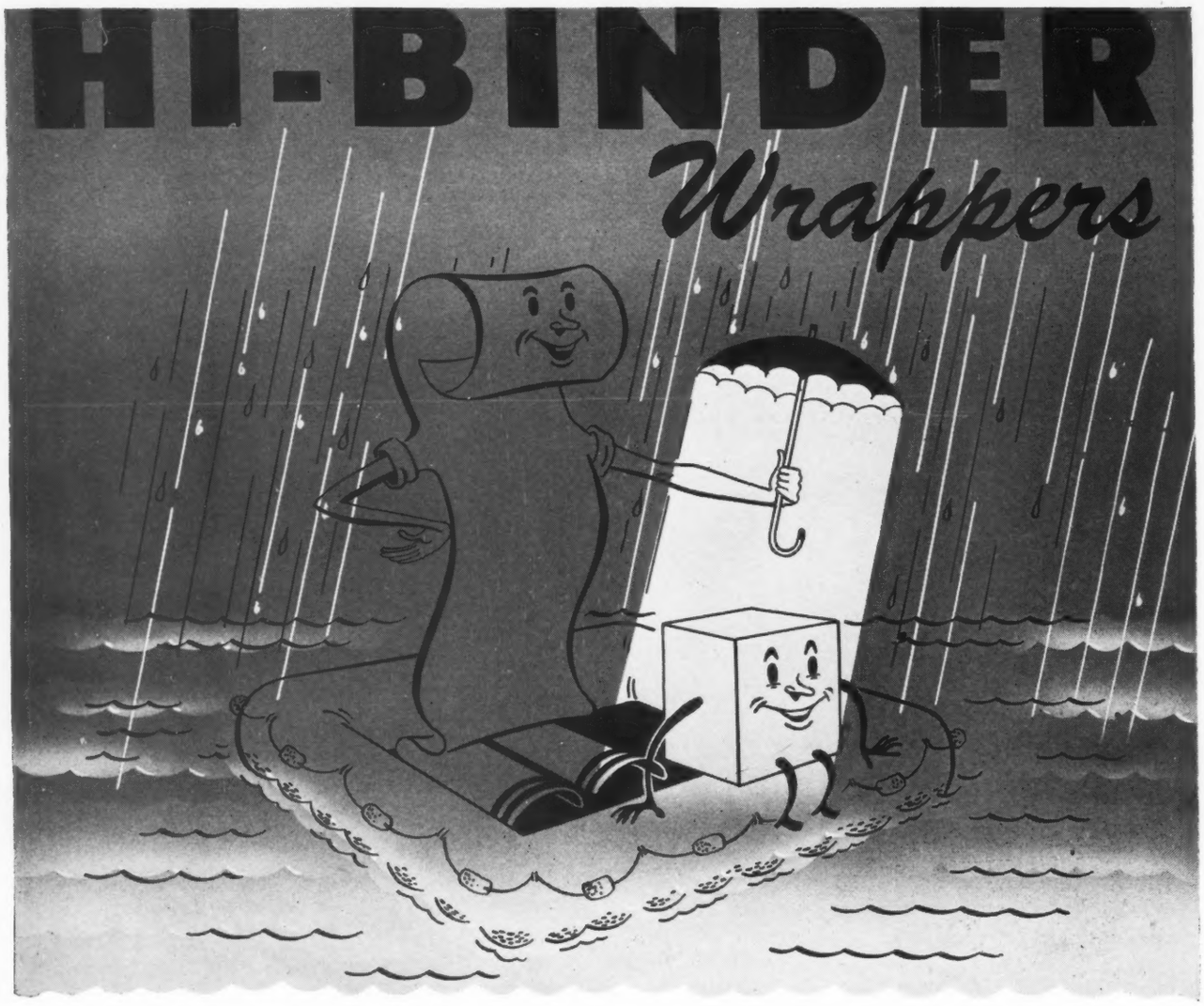
Leading converters use Alcoa Aluminum Foil as a laminating material, and can advise you on heat-seal packages for your hygroscopics, foods, and drugs. Write us for their names.

ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pa. Sales offices in leading cities.

ALCOA

ALCOA ALUMINUM FOIL

HI-BINDER *Wrappers*



MOISTURE PROTECTION

Whether it's preservation from the elements or the need to keep delicate moisture and aroma within the package, HI-BINDER will do a job for you. It's available at once, too!

Water-proof - Vapor-proof, moisture-proof packages in many colors, of laminated, impregnated or coated cloth, foil, paper or cellulose film. HI-BINDER is a rugged, attractive answer to your packaging problem.

SPECIALISTS IN WRAPPER PROBLEMS *Prompt Delivery*

Converted by
The Floyd A. Holes Co.,
Bedford, Ohio

THE CENTRAL OHIO PAPER CO.

226 North Fifth Street Columbus 16, Ohio

Also in Detroit, Cleveland, Pittsburgh, Dayton, Indianapolis, Toledo, Charleston

FOR THE LATEST WORD IN

CONTAINER SEALING EQUIPMENT

- Case Numbering
- Case Imprinting

● Write now—*today*—for your copy of PACKOMATIC's *new* MODEL "D" CASE SEALER folder that graphically pictures and completely describes this most effective and economical way to glue and seal paper shipping case tops and bottoms—*simultaneously* and *automatically.*

Learn about PACKOMATIC's production-proved unit that is adjustable to a variety of glue spreads—to a wide range of shipping case sizes—and that is adaptable to top sealing or to bottom sealing only, if desired.

Learn how America's top-flight companies—in practically every industry—prefer PACKOMATIC's MODEL "D" CASE SEALERS for their (1) simplicity of design, (2) low operating and maintenance costs, (3) economical glue consumption—and (4) for the fact that they are precision-engineered, durably built—and capable of day-in, day-out, trouble-free operation.

PACKOMATIC's *new* MODEL "D" CASE SEALER folder gives information also on PACKOMATIC's CONSECUTIVE SERIAL NUMBERER—on PACKOMATIC's AUTOMATIC CASE IMPRINTER—and on PACKOMATIC's HAND GLUE BELT COMPRESSION SEALER and MODEL "D" TOP AND BOTTOM GLUER.

Coupon below attached to your letterhead brings you PACKOMATIC's *new* MODEL "D" CASE SEALER folder without cost or obligation. See Metropolitan Classified Telephone Directory for PACKOMATIC's nearest office—or write Joliet.

Typical PACKOMATIC *Equipment*

Shipping Case Gluers & Sealers . . . Case Imprinters . . . Automatic Serial Numberers . . . Shipping Case Packers.

Carton Sealing Machines . . . Carton Feeders . . . Dating (Coding) Devices . . . Auger Packers . . . Volumetric Fillers . . . Net Weight Scales.

Paper Can Tube Cutters . . . Tube Gluers . . . Tube Cappers . . . Paper Can Conveyors . . .

For better packaging and handling tomorrow—see PACKOMATIC today.

PACKOMATIC
PACKAGING MACHINERY
J.L. FERGUSON CO. JOLIET ILL.

New York • Chicago • Boston • Cleveland • Denver
Los Angeles • San Francisco • Seattle • Baltimore
Philadelphia • Portland • Tampa • Dallas

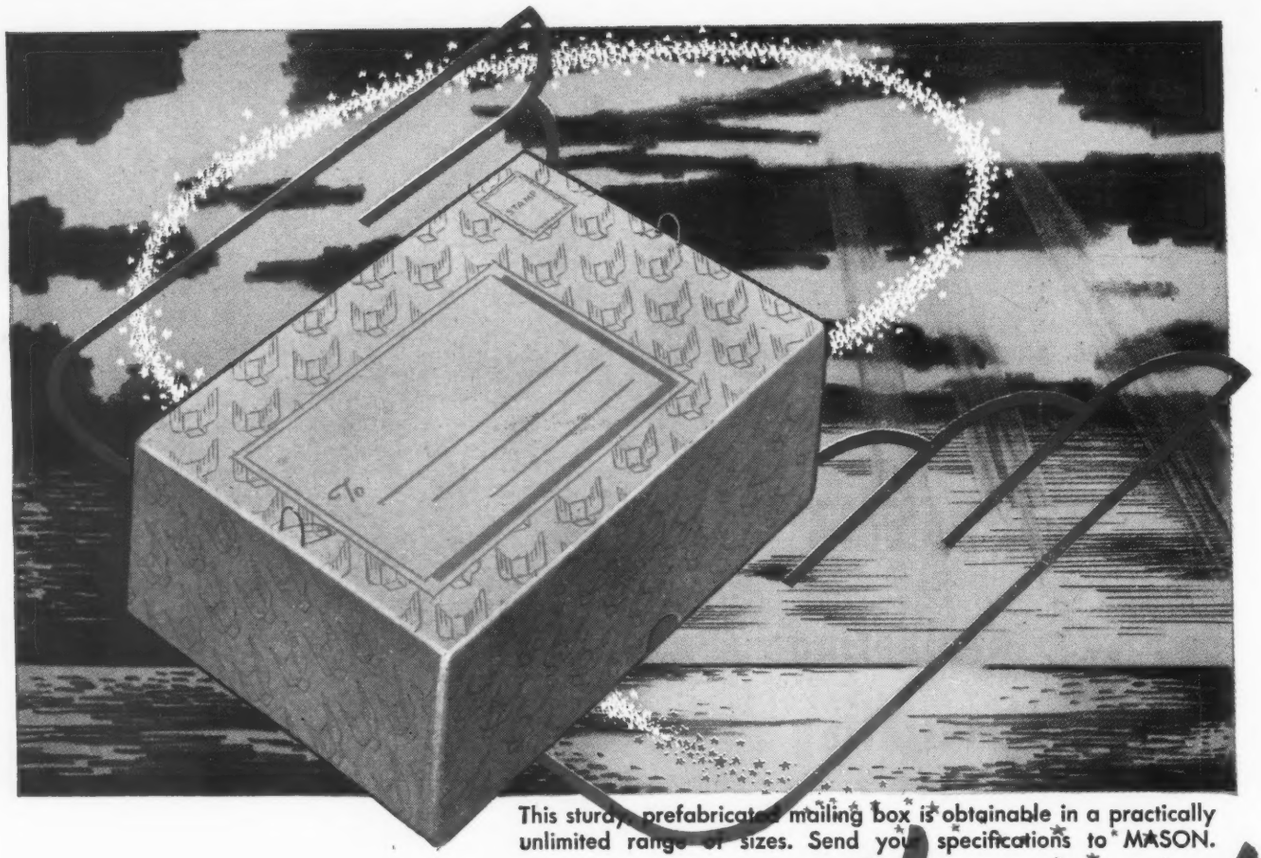
J. L. FERGUSON CO., Dept. MP-C9
Joliet, Illinois

Please send complete data on ☐ Case Sealing ☐ Carton Filling and Sealing ☐ Can Filling Equipment.

Company.....

Address.....

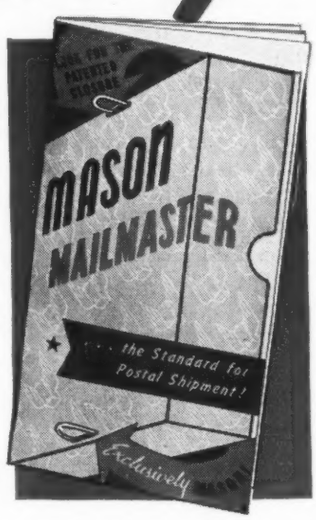
City.....*State*.....



This sturdy, prefabricated mailing box is obtainable in a practically unlimited range of sizes. Send your specifications to MASON.

IT'S THE BOX WITH *Wings!*

Today's favorite airline shipper is the famous Mason MailMaster — a safe, light airway package that assures quick, economical shipping. From its wing motif box wrap to the sturdy, special formula craftboard it has been engineered to reduce your shipping costs. Thousands of companies use this box for all small parts shipping, including air mail and air express. If your shipping problem involves cost reduction, postage saving, elimination of product damage and speedier operations, you can depend on Mason MailMasters — it's the box with wings. Write The Mason Box Company, Dept. 31, Attleboro Falls, Massachusetts.



Write today for a new catalog showing the entire line of Mason MailMasters — the box with wings.

The MASON BOX COMPANY

MANUFACTURERS OF AMERICA'S NUMBER ONE BOX . . . THE MASON MAILMASTER

Near Crisis at Oxford Paper Company by Tony Barlow

GREAT CONSTERNATION! OXFORD
LABORATORIES UNCOVER A POUND OF PULP
WITH ONLY 1,499,999,998 FIBRES,
INSTEAD OF THE USUAL 1,500,000,000 FIBRES.

LABORATORY research plays a vital part in the making of Oxford's many different kinds of quality printing papers. This research, along with product testing, covers every phase of Oxford papermaking from wood to finished paper.

Oxford laboratories are constantly engaged in anticipating paper problems, in creating new applications for paper, in tackling current paper problems and standing guard over quality standards.

In fact, over 5,000 laboratory and control tests are made during each day's production.

This testing serves as a guide to and supplements the "know-how" of Oxford craftsmen — many of them, by the way, third-generation papermakers at Oxford.

Behind all this stands the company's long experience and specialization in quality papers — experience sharpened by making over 1,000 miles of quality paper a day for many years.

When *you* are in need of quality printing paper why not ask your paper merchant for Oxford quality paper?

Included in Oxford's line of quality printing and label papers are: ENAMEL-COATED — Polar Superfine, Maineflex, Mainefold, White Seal and Rumford Litho C1S; UNCOATED — Engravatone, Carfax, Aquaset Offset, Duplex Label and Oxford Super, English Finish and Antique.

OXFORD PAPER COMPANY

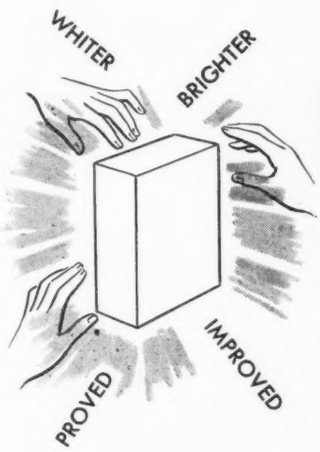
230 PARK AVENUE, NEW YORK 17, N. Y.

MILLS at Rumford, Maine and West Carrollton, Ohio — *WESTERN SALES OFFICE: 35 East Wacker Drive, Chicago 1, Ill.* — *DISTRIBUTORS in 48 Key Cities*

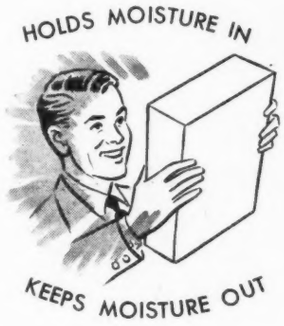
Right over there!

FOLDING CARTONS

. . . MAYBE ONE OF THOSE TWO FAMOUS GARDNER-RICHARDSON IS JUST WHAT YOU'VE BEEN LOOKING FOR



COATED LITHWITE CARTONS: Made of the revolutionary clay-coated paperboard pioneered by Gardner-Richardson. Proved and improved for seven years. Whiter. Brighter. Its smooth, hard, chalk-free surface insures sharper, more brilliant printing . . . makes more eyes reach for your product in modern mass displays. Facilities are being expanded to increase *Coated* Lithwite production (currently oversold), making it available in a greater range of sizes. Why not write for additional information?



HYDROTITE CARTONS: Made of a time-tested paperboard with three-layer construction. Asphaltic center layer retards to a high degree both the entrance and the escape of moisture. Helps guard against weight losses and moisture absorption. If you have a product which requires effective (very high, but not 100%) protection, *Hydrotite* may be the answer to your needs. Why not find out? Ask us—without obligation—to make up some sample *Hydrotite* cartons to test in your laboratory and in your machines.

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard, Middletown, Ohio

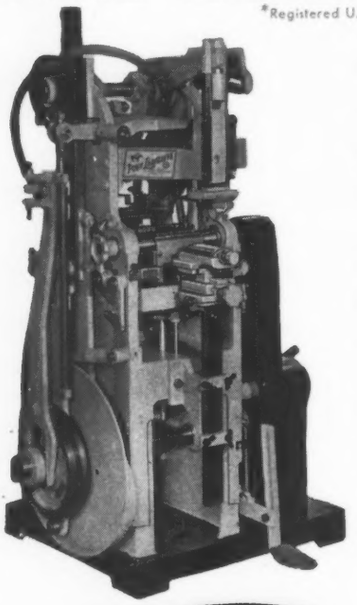
Sales Representatives in: Boston • Chicago • Cleveland • Detroit • New York • Philadelphia • Pittsburgh • St. Louis

Prestige for your Products

LABELED by

PONY LABELRITE*

*Registered U. S. Pat. Off.



When you sell the Well-Groomed market, you *should* have a well-groomed product. Make sure of the finest appearance by labeling on the Pony Labelrite.

YOU LOSE 3 WAYS IF YOU DON'T "LABELRITE"!

By paying *extra* help to wipe off excess adhesive that seeps from beneath labels.

By running the risk of loose label edges that mean torn labels.

By risking faulty register that impairs the impression of Quality.

Never any excess adhesive to mar its appearance ...or to "wipe off"

... due to the "twin-roller" micro glue control which applies a tissue-thin film of adhesive with full-surface gluing.

Always perfectly registered with ALL edges glued down!

because VACUUM holds labels rigidly and continuously from pick-up through glue-roll contact to applying point, in straightline stroke from hopper to container.

Fine Labeling Identifies Finer Products!

NEW JERSEY MACHINE
corporation

1510 Willow Ave. HOBOKEN, N. J.

Chicago Office — 325 West Huron St.

Cincinnati Office — 1701 Carew Tower

LET US PACKAGE YOUR PRODUCTS in Canada for the CANADIAN MARKET

Ship products in bulk and save on lower custom and freight tariffs.

New containers designed to your specifications.

Every Rowe Package embodies product protection, sales appeal, consumer utility and cost limitation.

Your inquiries invited.

A *Complete* PACKAGING SERVICE

ROWE

ROWE PACKAGING CO., LIMITED – TORONTO, CANADA

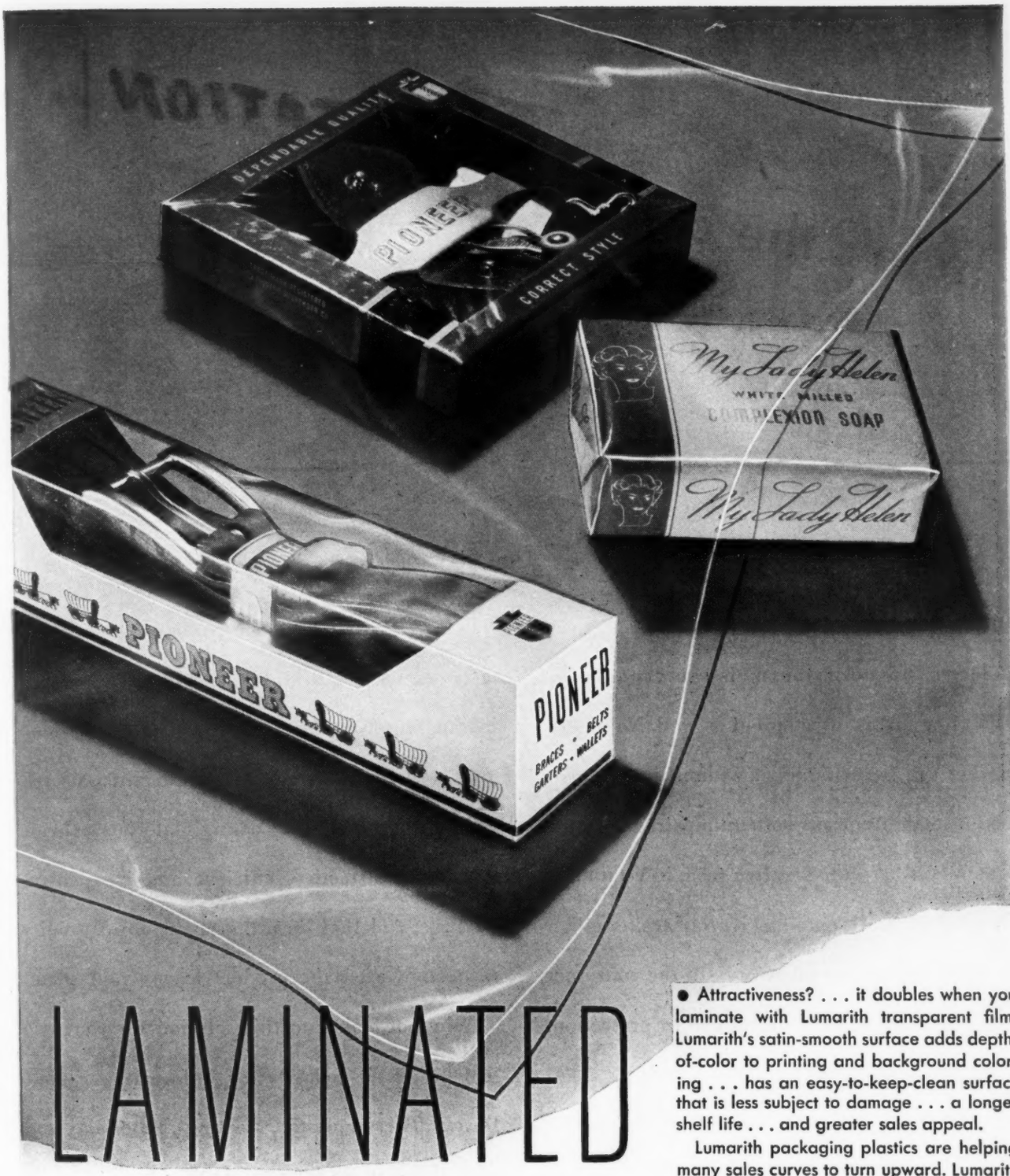
Creative designing and restyling
Exclusively handmade boxes

by

MAKDON

in New York City
306 WEST 37th STREET • SINCE 1940

in Paris, France
STE ANONYME JACQUES MAKOWSKY
ATELIERS D'IMPRESSION ET DE CARTONNAGE D'ART
34 RUE DES PEUPLIERS • SINCE 1920



LAMINATED

with Lumarith film*

A CELANESE* PLASTIC

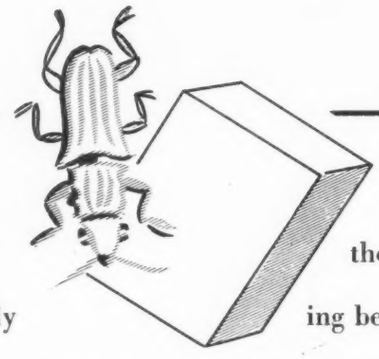
*Reg. U. S. Pat. Off.
†Trademark

● Attractiveness? . . . it doubles when you laminate with Lumarith transparent film. Lumarith's satin-smooth surface adds depth-of-color to printing and background coloring . . . has an easy-to-keep-clean surface that is less subject to damage . . . a longer shelf life . . . and greater sales appeal.

Lumarith packaging plastics are helping many sales curves to turn upward. Lumarith is produced in transparent films for bags and wraps . . . sheets for formed and fabricated containers . . . molding materials for special shapes, container-product combinations, and boxes with reuse features. Investigate the potential of this Celanese plastic as a positive sales producer.

Celanese Plastics Corporation, a division of Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y., producers of: LUMARITH,* FORTICEL,† CELCON,† CELLULOID,* VIMLITE.*

here's the answer to INFESTATION MVT



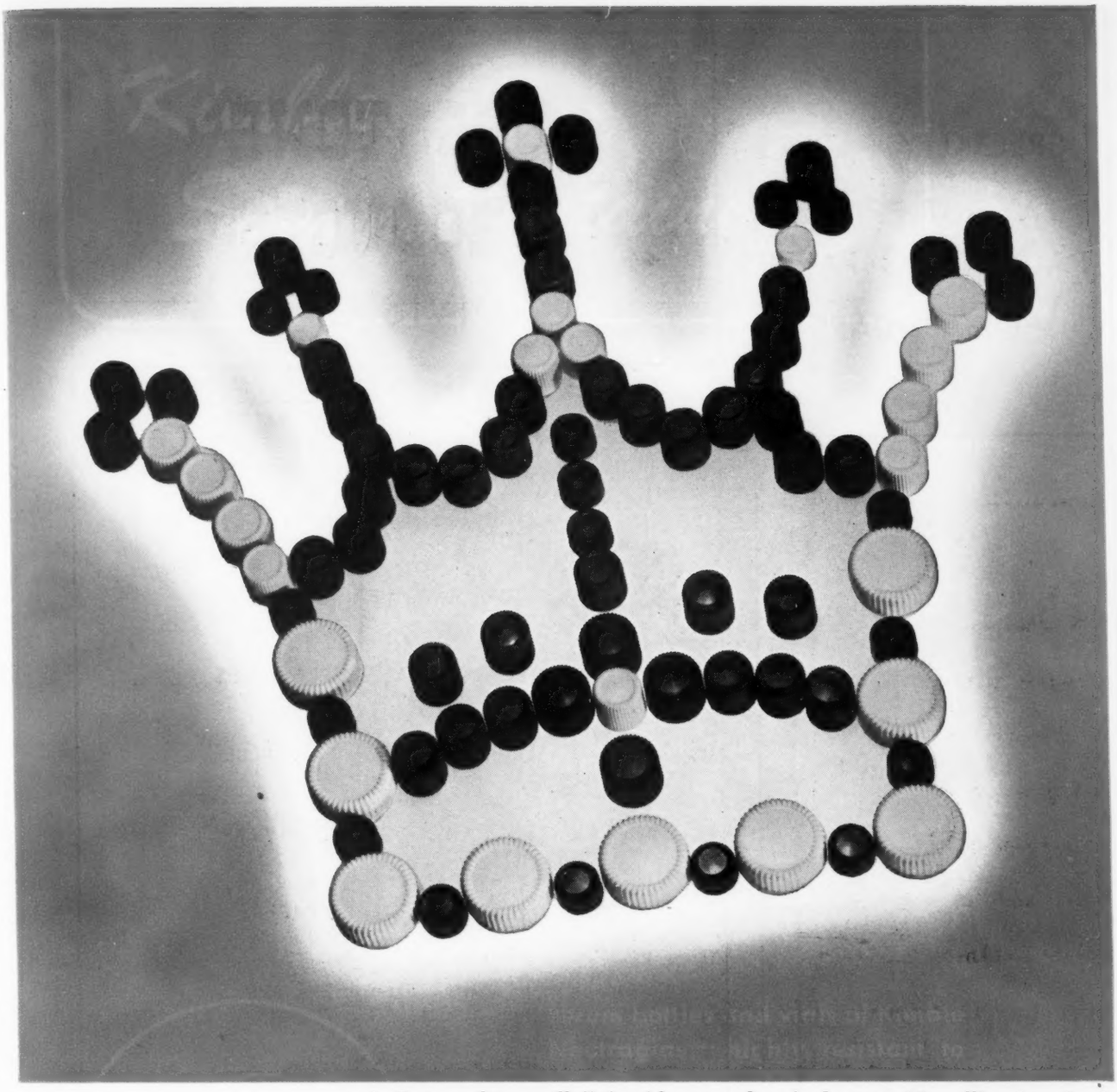
Packers of hygroscopic, insect-attracting goods—foodstuffs, especially—learn the need for moisture-vapor-proof packaging that is insect-proof as well. No quality market can be maintained without quality protection, and this means both unimpaired moisture content and absolute freedom from infestation in the product. And no product is proof against either MVT or infestation on its way to the consumer unless it is packaged with an eye to protection.

This is the role of Darex Thermoplastic Coating Materials. Offering double protection—against moisture-vapor transmission and against the invasion of insects—the coating best suited to your product can be applied with a simple method easily incorporated into your regular packaging line, without the need for change in your standard package. Darex Thermoplastic Coating Materials provide a smooth, attractive, efficient and inexpensive package, and they do a thorough job of quality protection after the product leaves your plant.

Why not look into this solution for your two big problems today? For information about Darex Thermoplastic Coating Materials and what they can do for you, write . . .

PACKAGING DIVISION DEWEY AND ALMY CHEMICAL COMPANY CAMBRIDGE 40, MASSACHUSETTS

DAREX THERMOPLASTIC COATING MATERIALS



An Empress closure will distinguish your package in the competitive selling days ahead.

EMPRESS closures command respect

The new Empress line of handsome, functional plastic closures is now being developed in the Owens-Illinois Laboratories. They will soon be ready to add distinction to your containers—to command respect for your product.

Empress closures will appear in a royal array of rich colors, in more than twenty different sizes . . . will help drug and cosmetic packages sit with majesty on dealers' shelves, on home dressing tables...will be the choice whenever the "good-looks" of a package are important.

This new stock line is just one outstanding example of our complete closure service. Let us discuss your closure requirements with you.

CLOSURE DIVISION

OWENS-ILLINOIS GLASS COMPANY

TOLEDO 1, OHIO · BRANCHES IN PRINCIPAL CITIES

SPECIALTY PAPERS
LAYOUT PRINTED
PACKAGING PAPERS
GIFT WRAPS

DECOTONE PRODUCTS
DIVISION

CUSTOM-CREATES PACKAGING MATERIALS
FOR SPECIFIC PRODUCT NEEDS

PACKAGING PAPERS

MOISTURE-VAPOR PROOF PAPERS

PROTECTIVE COATED SPECIALTIES

PAPER-BACKED ALUMINUM FOIL

PRINTED & EMBOSSED BOX WRAPS

PRINTED TRADE MARK PAPERS

LAMINATED PAPERS

HEAT-SEALING PAPERS

and Many Others

DECOTONE PRODUCTS
DIVISION
Fitchburg Paper Company
PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS
FITCHBURG, MASS.

Kimble NEUTRAGLAS Serum Containers

Serum bottles and vials of Kimble Neutraglas — highly resistant to solvent action and chemical attack — suitable for all types of closures — offer utmost protection.

For Assurance

• • • *The Visible Guarantee of Invisible Quality* • • •

KIMBLE GLASS COMPANY • • • VINELAND, N. J.

NEW YORK • CHICAGO • PHILADELPHIA • DETROIT • BOSTON • INDIANAPOLIS • SAN FRANCISCO

GIVING THAT COME-HITHER LOOK TO THE SALT AND PEPPER

Warehouse Point Company took this salt and pepper set out of its inexpensive cardboard box and put it in a handsome (also inexpensive) Shaw-Randall visible package. *The result — greater display and sales appeal for the product!*

Shaw-Randall acetate packaging *can be achieved at very low cost and it will lift your low-price items into the quality merchandise class. Let our packaging engineers give you their ideas.*

SHAW-RANDALL CO.

DESIGNERS and CREATORS of VISIBLE PACKAGES

PAWTUCKET • RHODE ISLAND

A DIVISION OF SHAW PAPER BOX COMPANY

SALES REPRESENTATIVES

Fred Mann & Co., New York; H. B. W. Snelling, Boston; L. T. Swallow & Associates, Detroit

WITH A ¼ Turn OF THE Anchor Amerseal Cap

THE Anchor Amerseal Cap is a quick-acting, dependable closure that seals or reseals with a simple quarter turn. It speeds packaging because it may be started at any point on the container finish. And it's adaptable for hand, hand chuck or machine closing operations.

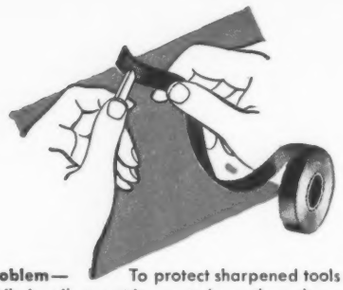
Equally spaced, double-notched lugs in the Amerseal Cap grip the underside of the glass threads and pull the liner down tightly, insuring uniform distribution of pressure all the way around the container finish.

This easy removal and reseal feature has made the Amerseal Cap the most popular closure with housewives over the years. That means she buys more packages sealed with Amerseal Caps. That means more sales, more profits for you.

Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS

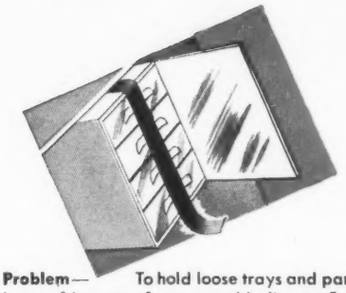
Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO



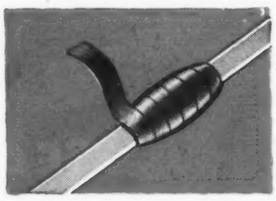
Problem— To protect sharpened tools while in crib or not in use, to keep them sharp and reduce sharpening time.

Solution—Before returning tools to crib, strips of Self-Stik Mystik are placed quickly and easily on sharp edges.



Problem— To hold loose trays and parts in a refrigerator from assembly line to final customer, eliminate damage, scratches.

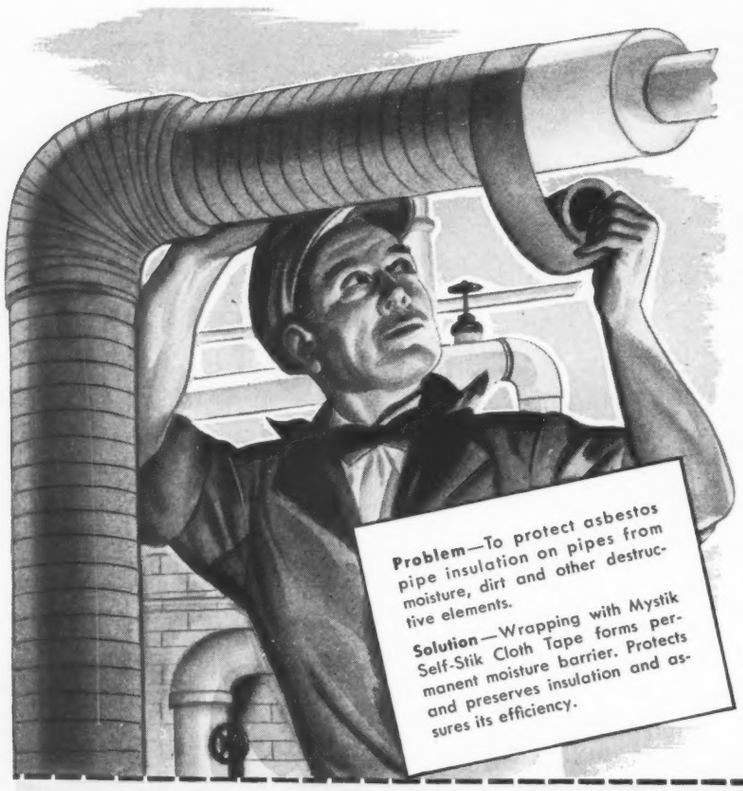
Solution—Mystik Self-Stik Paper Tape is fastest, easiest way to tape parts in place; peels off clean.



Problem—To make all kinds of electrical repairs on cable, wiring, connections, etc. with greater speed and permanency.

Solution—Mystik Self-Stik Waterproof Cloth Tape is stronger, applies faster, makes smaller splices, holds better, gives greater protection from abrasion, moisture. Cleaner to handle.

Methods *by Mystik*



Problem—To protect asbestos pipe insulation on pipes from moisture, dirt and other destructive elements.

Solution—Wrapping with Mystik Self-Stik Cloth Tape forms permanent moisture barrier. Protects and preserves insulation and assures its efficiency.

Speed Product Packaging

Mystik is an all-around sealer, protector, holder with thousands of industrial uses. It's especially versatile when it comes to solving your packaging-packing-shipping problems. Let it cut time and costs in getting your products safely to market.

Mystik comes in many forms—MYSTIK SELF-STIK TAPE, cloth or paper, up to 36″ wide—MYSTIK MASK, a reinforced paper material for protecting fine surfaces—MYSTIK SPRA-MASK, a fast method for stencil spray-painting designs and insignia—MYSTIK SAND BLAST, a protective covering for sand blasting glass—MYSTIK DRI-PIPE, an insulation to stop pipe drip—MYSTIK-PRINT, for Self-Stik labels and signs.

FREE *— Send for Mystik samples and interesting new booklet showing how Methods by Mystik can cut costs in your plant. Mail coupon to—Mystik Adhesive Products, 2637 N. Kildare, Chicago 39. Sales offices in major cities. Export office, New York City. Canada — G. A. Moggridge Co., Ltd., St. Catharines, Ont.*

Mystik Adhesive Products, 2637 N. Kildare, Chicago 39

SEND *FREE* BOOKLET AND FOLLOWING SAMPLES:

☐ Mystik Cloth Tape; ☐ Mystik Waterproof Cloth Tape;
☐ Mystik Mask; ☐ Mystik Spra-Mask; ☐ Mystik Sand Blast;
☐ Mystik Paper Masking Tape; ☐ Mystik Dri-Pipe; ☐ Mystik-Print.

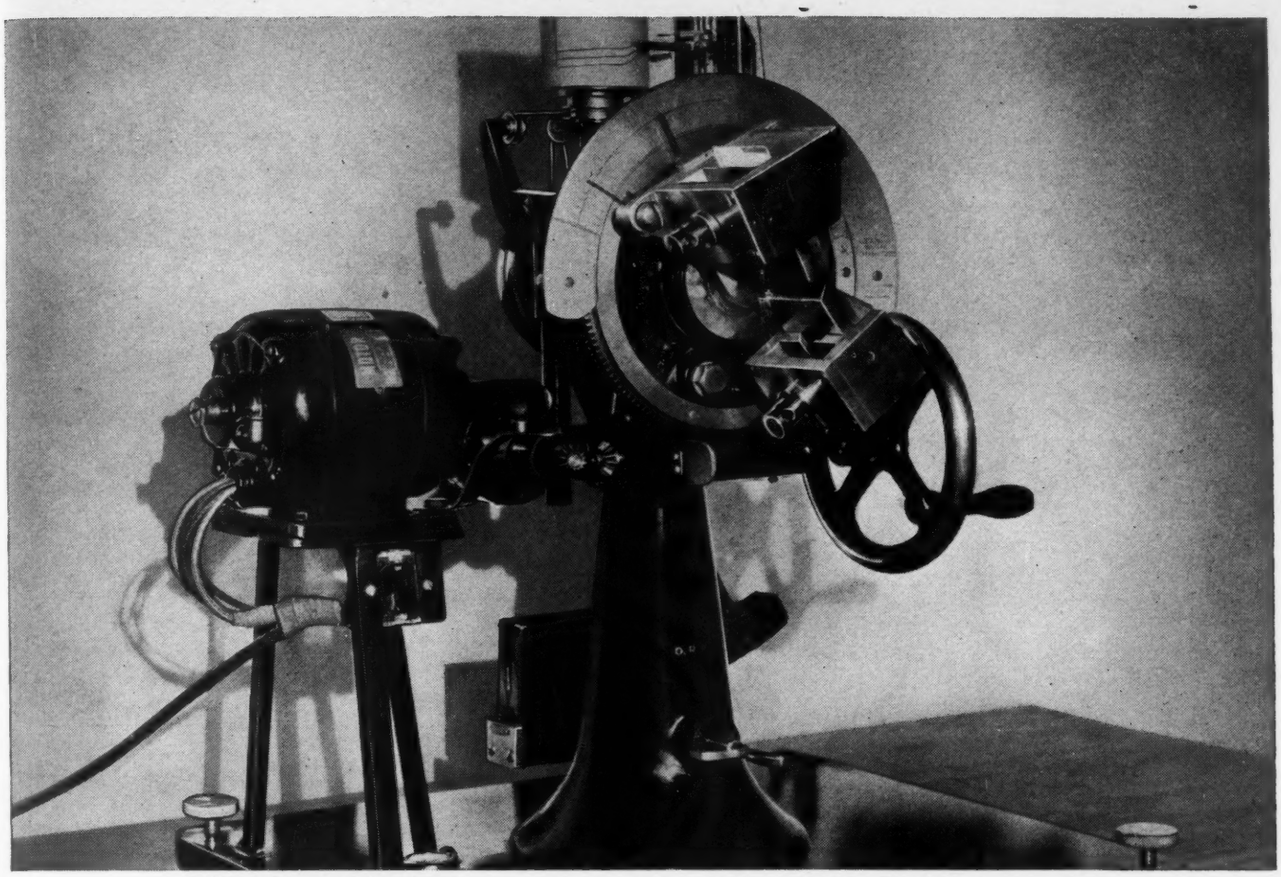
Name_____ Title_____

Company_____

Address_____

_____

MYSTIK
Self-Stik
ADHESIVE PRODUCTS
"ANYTHING THAT STICKS"



"How stiff is a piece of tin plate?"—the question on which the Schopper Testing Equipment is an expert.

FOUR "WISE GUYS" OF THE LABORATORY

The strange-looking machines on this page may not know all the answers about tin plate.

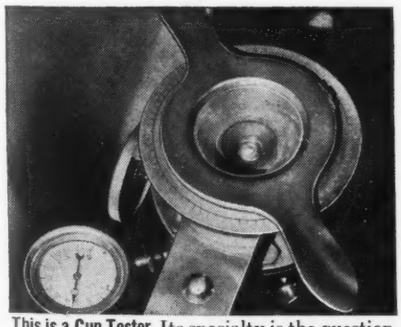
But, by and large, they are extra bright on most aspects of this subject. And they play an important part in the quality-control operations at Can's Central Research Laboratories at Maywood, Illinois.

Quality control is something in which American Can takes a deep interest. For we are obsessed with the idea that you can't be too sure about container materials.

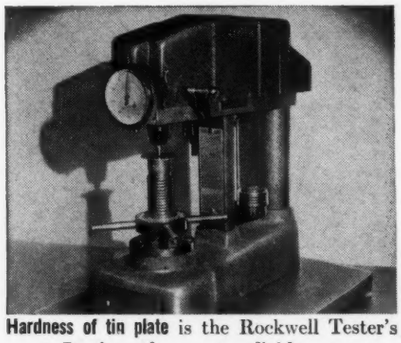
So, tin plate, adhesives, paper, solder, enamels, and sealing compounds—all components of the containers we make—get a going-over at Maywood, which results in a wide margin of safety for the products our customers buy.

It may be once in a business lifetime that these wide margins are exceeded and the container fails. Again, it may be never. But American Can serves its customers on the basis that *before—not after*—the horse is stolen is the time to put the padlock on the barn door.

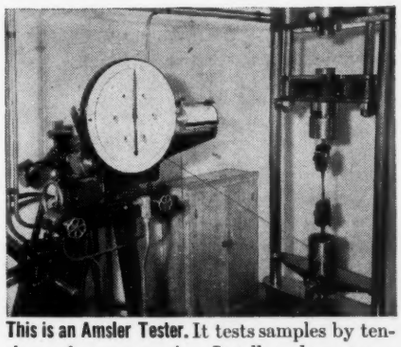
CANCO **AMERICAN CAN COMPANY**
New York • Chicago • San Francisco
No other container protects like the can



This is a Cup Tester. Its specialty is the question, "What are the drawing properties of tin plate?"



Hardness of tin plate is the Rockwell Tester's meat. It gives the exact, reliable answer.



This is an Amsler Tester. It tests samples by tension or by compression. It tells us how strong tin plate is.

SEE THIS FIRST POST-WAR

FOR
HIGH SPEED
DELIVERY

R DISPLAY... COMING SOON!

Kono-Mead

HIGH SPEED

BAG-MAKING MACHINES

This is a preliminary announcement of the public display now being arranged, to demonstrate the amazing new KONO-MEAD ROTO BAG-MAKER.

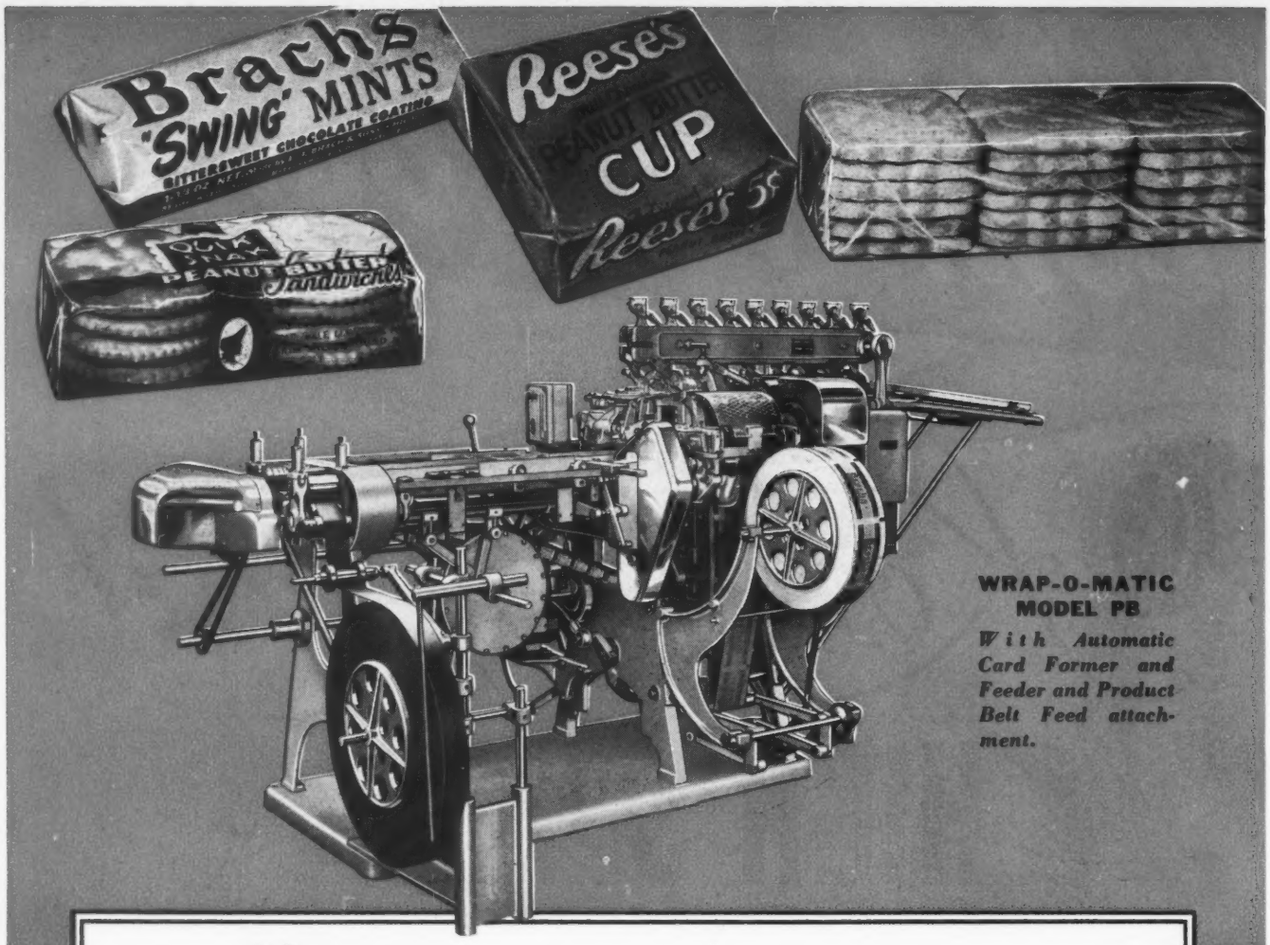
This high-speed electronically controlled machine produces heat-sealed bags with glue reinforcement at the rate of 5,000 to 12,000 per hour—with only one operator. Bags may be single or double-walled, in sizes from 2 in. to 18 in. long and from 1½ in. to 9 in. wide.

This high-output, low-cost producer will cut your bag expense and increase your output.

ORDERS WILL BE TAKEN AT THE SHOW FOR IMMEDIATE DELIVERY

KONO-MEAD EQUIPMENT CORPORATION

133-23 35th AVENUE • FLUSHING, LONG ISLAND, N. Y. • TEL. FL. 3-8113



WRAP-O-MATIC MODEL PB

With Automatic Card Former and Feeder and Product Belt Feed attachment.

Now WRAP-O-MATIC *offers*

3 New Wrapping Economy Features . . .

- **Automatic Card or Boat Former and Feeder**
- **Automatic Product Belt Feed**
- **Multiple Stack Magazine Feeders**

Wrap-O-Matic, designed and built to give high speed wrapping of fragile and irregular shaped candy bars, biscuits and cookies, now offers 3 new additional features that provide still greater wrapping production economies.

1. **Automatic card or boat former and feeder —uses rolled stock material—boats and cards formed and cut to desired length—assures positive feed and reduces operating costs.**

2. **Automatic product belt feed for P.B.—enables operator to feed machine via continuously moving belt which transfers product to intake pockets—reduces product handling—simplifies feeding operation.**

3. **Multiple stack magazine feeder for Model P.B.—permits operator to feed machine through magazines—which transfer product to intake pockets—increases operating efficiency—simplifies feeding operation.**

Take advantage of these latest Wrap-O-Matic wrapping economy features. Write today for <u>new</u> Wrap-O-Matic folder and more complete details.

Lynch Package Machinery Corporation

TOLEDO 1, OHIO, U. S. A.

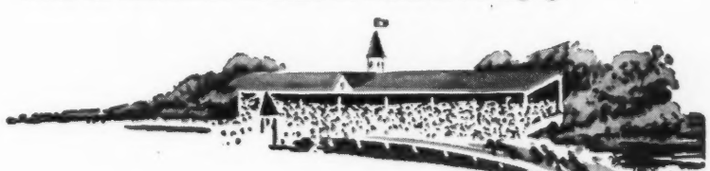
"WINNERS are notably endowed with SPEED—PRECISION, AND PERSONALITY"

says ROBERT GAIR

Modern types of packaging machinery are endowed with speed, and personality too . . . and each machine demands a "uniform precision" carton . . . just the kind of distinctive "tailor made" cartons that Robert Gair has been creating and producing consistently for over eighty years . . . cartons that are ***GAIRanteed***.

From a "selling impulse" viewpoint many of our cartons have joined the parade of constant WINNERS.

Write for informative brochure on Precision Packaging.



GAIR

ROBERT GAIR COMPANY, INC., NEW YORK—TORONTO • PAPERBOARD—FOLDING CARTONS—SHIPPING CONTAINERS

...INVISIBLE BASE *that holds things in place...*

Another contribution to modern packaging by U.S.E. Now the transparent acetate box is *really* transparent from top to bottom and side to side. Customer sees *through* the box in any direction — no part of your product or package need be hidden in order to obtain security. The captive bottom is also clear, transparent acetate, died out to hold the merchandise.

Let us show you how this *captiv*ating idea can *capture* more sales for your merchandise.

Whatever your packaging problems, you will get a head start on their solution by sending today for the U.S.E. Packaging Check Sheet. We'll send it to you free in the U.S.E. Envelope Analyzer Kit, which also contains check sheets on Mailing and Business Systems.

P-16T

UNITED STATES ENVELOPE COMPANY

14 Divisions from Coast to Coast

U·S·E PROTECTIVE PACKAGING

K KELLOGG CONTAINER DIVISION SPRINGFIELD MASS.

THIS MUCH you can safely PREDICT about a WOMAN

...when she shops, she will make 3/4 of her buying decisions, believe it or not, AT THE POINT-OF-SALE!

That fact, long known to leading retail merchandisers, has been confirmed by national surveys. Women not only buy ¾ of all the goods sold at retail, but they also make ¾ of their buying decisions when *in the stores* shopping!

Complete realization of that situation and all that it implies is important to manufacturers of goods sold in packages. Because the package either attracts or it does not. It either makes as good or a *better* impression of *quality within* than packages of competing products, or it does not. It either helps your product *sell,* or it does not

...Never underestimate the power of the package.

LET RITCHIE WORK WITH YOU to develop a better package at low unit cost. One that will instantly identify, fully protect and conveniently dispense your product—practical—production-planned—easy to fill or pack—to handle, to stack and display—but *above all* designed for eye-appeal, for quality impression—a package that sells!

Never the Power

COPYRIGHT 1945, W. C. RITCHIE & CO.

W.C. Ritchie and COMPANY

8848 Baltimore Avenue • Chicago 17

★ SET-UP PAPER BOXES

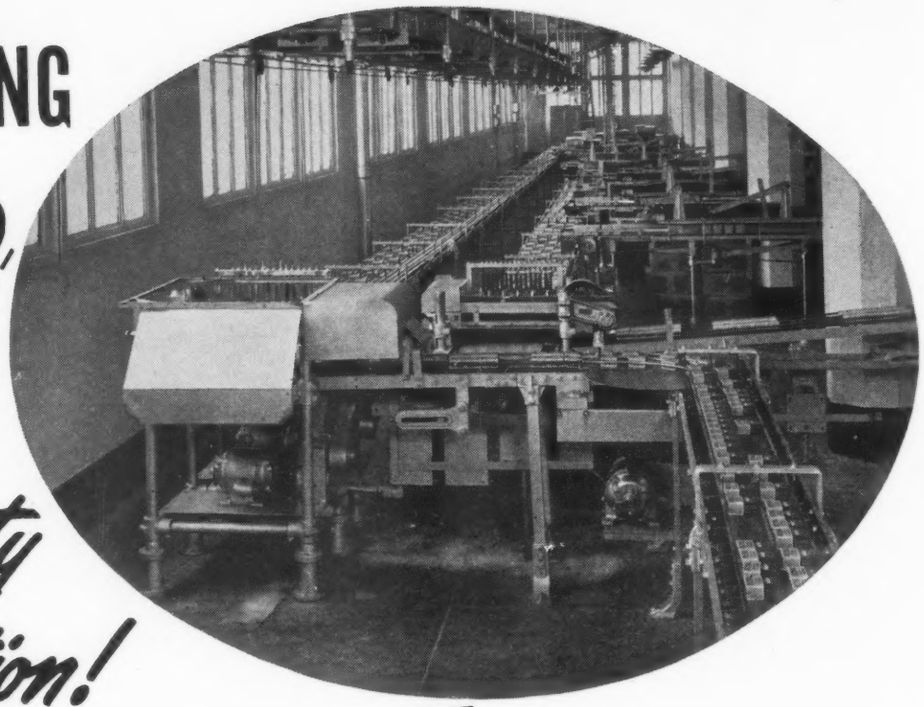
★ FIBRE CANS

★ TRANSPARENT PACKAGES

Underestimate of the Package!

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS • MILWAUKEE • ATLANTA • NEW ORLEANS • DENVER • PORTLAND • SEATTLE • MIAMI

SPOTLIGHTING STANDARD KNAPP *Simplicity of Operation!*



Illustrated is a Standard-Knapp system in action. Note the integration and simplicity with which Standard-Knapp automatic machinery works. Here some half-dozen packaging machines smoothly deliver their output to a collector line. This mechanism automatically delivers packages in the proper order, in any desired position, to any given point. Finally, one of Standard-Knapp's case packers or a bundling machine finishes the job.

This is another instance of the simplicity of operation with which Standard-Knapp specialized packaging machinery meets every type of package production requirement. Standard-Knapp engineers design Standard-Knapp machines to be as simple as possible, with a minimum of moving parts and a maximum of efficiency. That is why Standard-Knapp machines waste no power nor time in performing their assigned functions. That is why Standard-Knapp equipment is top standard for efficiency, economy and long life in the packaging industries.

Furthermore, Standard-Knapp engineers build Standard-Knapp machinery of the finest parts and materials. This is added reason for preferred selection of Standard-Knapp case packers, case sealers, labellers, bag fillers and other machines by leading concerns in the most important packaging industries.

STANDARD-KNAPP CORP.

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES

FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

570 Lexington Avenue, NEW YORK 22, N. Y.
221 North LaSalle St., CHICAGO 1, ILL.
145 Public Square, CLEVELAND 14, OHIO
300 Seventh Street, SAN FRANCISCO 3, CALIF.
420 S. San Pedro Street, LOS ANGELES 13, CALIF.
3224 Western Avenue, SEATTLE 99, WASH.
1208 S. W. Yamhill Street, PORTLAND 5, OREGON
349–350 Paul Brown Bldg., ST. LOUIS 1, MO.
6 Radcliffe Rd., ALLSTON, 34 (BOSTON), MASS.
Windsor House, Victoria St., LONDON S.W. 1, ENG.

. . . and the *Package* made the sale!

The story of this sale — like so many others these days — revolves around the package. It was the distinctively designed package that caught her eye, that created the impulse to buy that particular product — and not the one next to it. It was the *package* that made the sale! It is a "must" to give your product every advantage at the point of sale through better packaging. For flexible packaging with real selling power — A. P. G. is the one to see. Take advantage of A. P. G.'s half a century of experience with no obligation. Simply mail your inquiries to our General Sales Office, 122 East 42nd Street, New York 17, N. Y.

MEMBER FLEXIBLE PACKAGING INSTITUTE fpi

YOU HAVE THE PRODUCT — A. P. G. HAS THE PACKAGE

Sales-building cellophane or glassine bags and envelopes. Custom-built for your own particular needs. Also a complete range of stock sizes — printed or plain.

Smartly styled opaque envelopes in special prints, and in any size you may require, as well as all stock sizes — printed or plain — in special papers or regular grades.

APGCo

The American Paper Goods Co. OVER 50 YEARS OF SERVICE

KENSINGTON, CONNECTICUT CHICAGO, ILLINOIS

Sales Offices – New York•Chicago•Boston•Philadelphia•Charlotte•Atlanta•Cincinnati•Minneapolis•Fort Worth•San Francisco•Seattle

THIS IS A COLLECTION OF SAMPLES OF JUST SOME OF THE PRODUCTS PACKAGED BY S&S MACHINES

We've done our share of America's packaging, too

In many lines, the bulk of production of the industries is S&S packaged. . . . In many more, the job is split about evenly between S&S and others. . . . In almost every industry where the material to be packaged is a powder, granular substance or paste, S&S has supplied a goodly percentage of the packaging machines.

This is easy to understand when you remember that, in many cases, it has been S&S improvements that have made the advances in packaging technique — that have made practical many better packages at lower unit costs. Further, it has been S&S developments, like that of the first tight-wrapper, that alone have made possible many new triumphs of modern packaging.

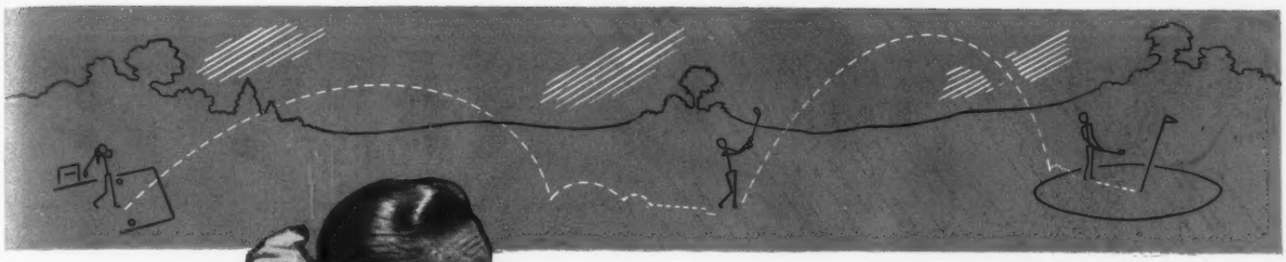
DURING THE WAR . . . the entire output of S & S machines was under priority regulations. Today we are doing our utmost to turn out machines to fill the avalanche of orders released by the sudden end of hostilities. We shall be glad to take care of your order as soon as possible, and remember . . . an S & S machine is *worth waiting for.* CONSULT US . . . if you are planning to package new products; or if you are looking for better, more economical packaging methods for your present lines. Our engineering staff is always available to help in the solution of *your* problems.

A GOODLY PERCENTAGE OF AMERICA'S FAMOUS PRODUCTS ARE PACKAGED ON

- **S & S** Filling Machines
- **S & S** Carton Filling and Sealing Machines
- **S & S** Bag and Envelope Fillers and Sealers
- **S & S** Tight-Wrappers
- **S & S** Complete Packaging Line

STOKES & SMITH Co — **FRANKFORD, PHILADELPHIA, U. S. A.**

FILLING · PACKAGING · WRAPPING MACHINES



It takes

COORDINATION

Beating par, in golf or packaging, means knowing what to do and then having the coordination to do it with unfailing precision.

On the fairway it is muscle coordination. In packaging it is the coordination of research and development, manufacture of board, quality control, and converting.

Planned Packaging is a complete service. Research and development find the right answer to new and unusual problems and get the direction line on fields where paperboard can reduce costs or improve package performance. Manufacturing converts the raw materials into quality cartons and containers including intricate details worked out for high speed packaging without costly interruptions.

If you want a better score on the packaging line, or on dealers' shelves, let **Planned Packaging** give you the answer.

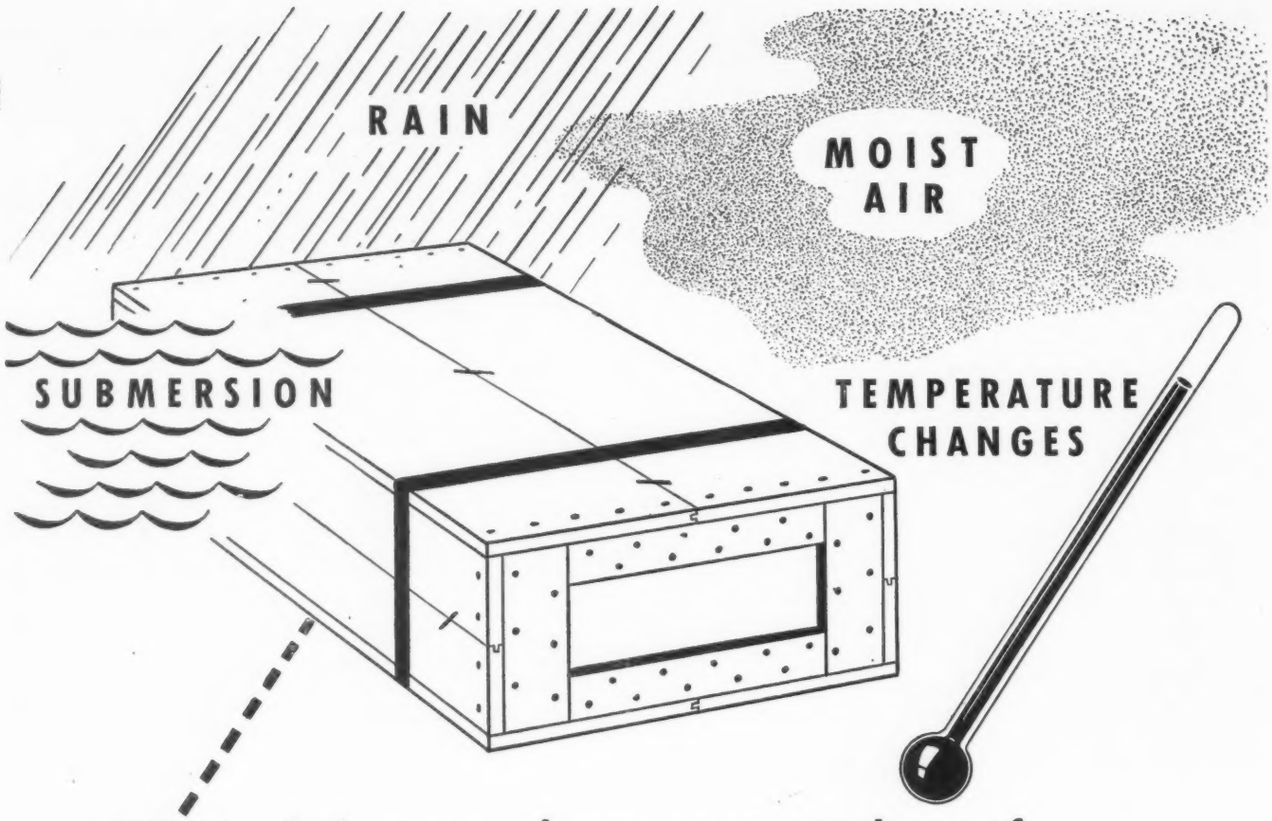
THE OHIO BOXBOARD CO.

RITTMAN, OHIO

Manufacturers of paper board, folding boxes, corrugated and fiber shipping containers, and converted specialties

SALES OFFICES: RITTMAN • AKRON • CLEVELAND • CINCINNATI • PITTSBURGH • NEW YORK • CHICAGO

Capacity 500 tons daily



NONE *of these can harm your products if packed in a case lined with* AQUASTOP

PROTECTION of mechanical products from damage by corrosion, mold or fungus is adequately provided by AQUASTOP, the waterproof packing case liner that can be used as box panels or as heat-sealed envelopes.

Cases of polished metal parts protected with AQUASTOP were completely submerged for several weeks without altering in any way the protective qualities of this amazingly efficient material. The parts had the same bright untarnished surfaces when taken from the cases as they had when packed.

Severe tests like this emphasize the extra margin of safety inherent in AQUASTOP for protection from damage by corrosion, mold or fungus.

Use of AQUASTOP provides a "breathing package" with an MVT rate as high as 10 grams per 100 square inches per 24 hours, preventing damage by condensation within the package due to temperature changes.

Furnished in several forms to your size specifications—box panels, envelopes or pre-fabricated bags—this material can simplify your packaging operations and help reduce damage claims.

Regardless of the type of product you make or sell—or whether you ship your products by air, water or ground transportation there is an application of AQUASTOP to meet your needs.

TECHNICAL DATA

No cracking
No tackiness
No flow
No loss of flexibility

The seal is as strong as the material itself.

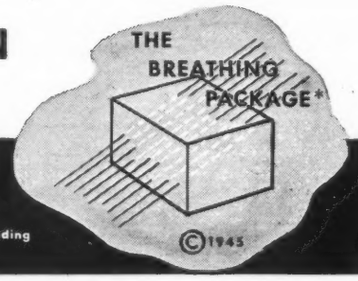
Retains waterproofness

"Breathes" a minimum of 5 grams per 100 sq. in. per 24 hours

Withstands minimum hydrostatic pressure of 40 lbs. per sq. in.

Send for descriptive data sheets.

PROTECTIVE COATINGS CORPORATION
Manufacturers and Consultants
681 Main Street • Belleville 9, N. J.



AQUASTOP

*Pat. Pending

does your product SELL?

It's a silly question — but nevertheless important. Undoubtedly your product does sell — by means of persuasive salesmen, extensive advertising and an attractive profit margin. What we mean is . . . does your product sell *itself?* Does its physical appearance, (1) attract the eye, (2) complete the sale, (3) build prestige for future progress? If it doesn't do all three and *more* — it's time to re-package . . . the RIGHT way!

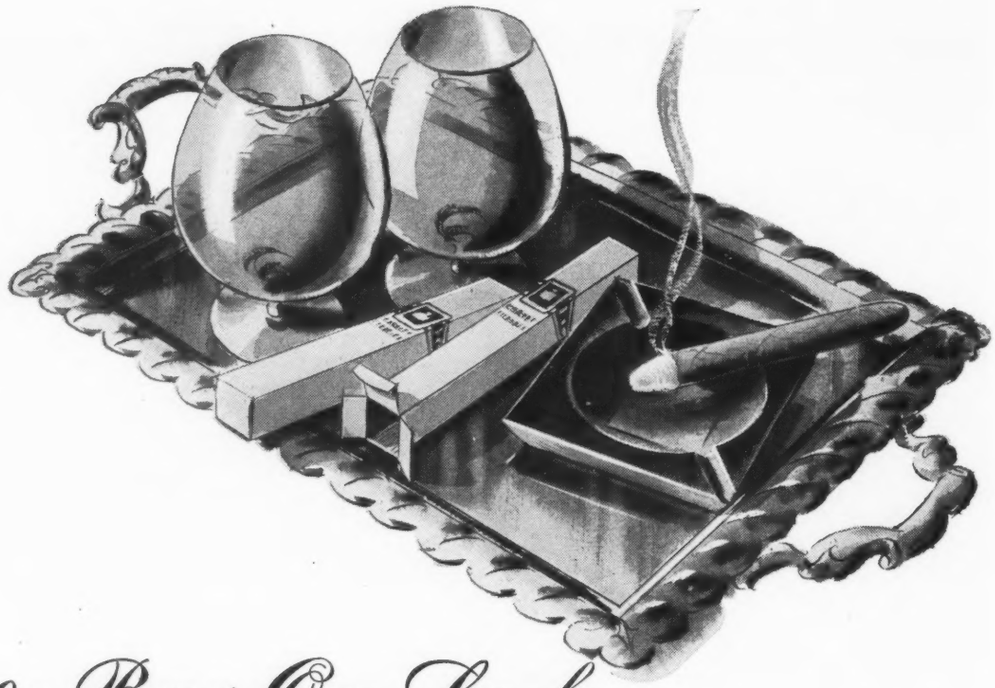
The set-up box has built-in sales appeal. In addition to its rugged strength and lightweight construction, the set-up box offers the opportunity for distinctive styling, powerful and informative sales messages — and a low cost quality appeal that builds repeat business. It's not just by chance the varied products of the 90 million dollar office supply industry are packed principally in set-up boxes. A compelling factor in any merchandising program, the set-up box will roll up its sleeves — pitch in and sell . . . for YOU!

*For the latest news on the Office and School supply Industries, call or write your nearest paper box manufacturer for the market, sales and industrial progress survey No. 71.

NATIONAL PAPER BOX MANUFACTURERS
Association
AND COOPERATING SUPPLIERS

Liberty Trust Building • Philadelphia 7, Penn.

FOR INFORMATION OR SERVICE • CONSULT YOUR NEAREST SET-UP BOX MANUFACTURER



Where 50c Buys One Smoke

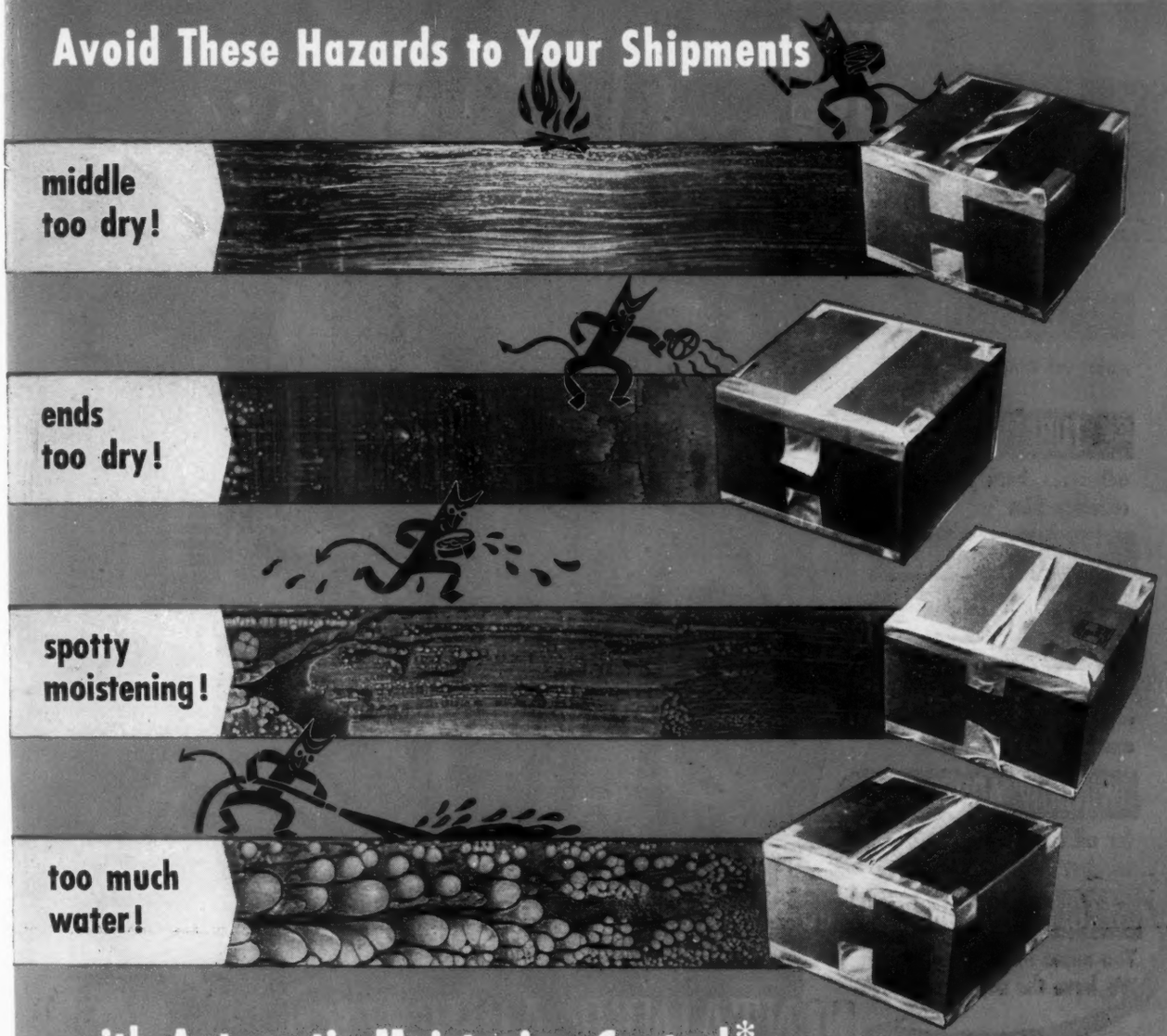
It's hard to beat a hand-made Havana
say smokers who can afford the best.
The limited production, careful curing and leaf selection make its cost high.
Of course, these fine cigars are individually nested
in protective inviting cartons of
Ridgelo Clay Coated Boxboard.
This quality feature enhances value and adds little to price.
That is why it is found too in the packaging of popular American cigarettes
where smooth attractive appeal is a sales requirement.
Ridgelo contributes its appeal alike to machine and bench-made products.
Ask your boxmaker to use it and compare.

MADE AT RIDGEFIELD, N. J., BY LOWE PAPER COMPANY

Ridgelo CLAY COATED BOXBOARDS

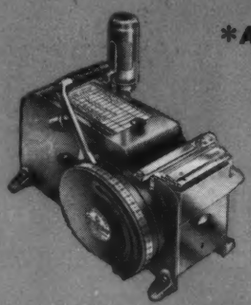
REPRESENTATIVES:
H. B Royce, Detroit • Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia

Avoid These Hazards to Your Shipments



with Automatic-Moistening-Control*

correct moistening!



*Automatic-Moistening-Control, patented feature of Counterboy tape machines, assures correct moistening—safe, fast sealing with a minimum of trouble!

Better Packages, INC.

SHELTON, CONN.

TAPE-SHOOTER #120
ONE OF 52 MODELS— Counterboy TAPE MACHINES FOR EVERY SEALING PURPOSE

flexibility...

UNION PASTE COMPANY

INTER-OFFICE MEMO

TO: All Salesmen and Advertising Dept.

Present shortage of vegetable and animal base adhesives is acute - no relief in sight. Take immediate steps to inform customers of this and offer our resin emulsions and resin-latex compounds. These are available and we know with our experiences they will outperform older types in many instances.

GLU-WELD
water-resistant adhesiv

TUBE WINDING
adhesives, both paper an
cellulose film

FLEXIBLE GLUES
for better non-warp qualitie

LABELLING ADHESIVES
labels to tin, glass, foil, films, and paper

WINDOW ADHESIVES
for all cellulose films in window carton work

SPECIALTY ADHESIVES
You name the problem
We have the adhesive

CONTAINER ADHESIVES by

UPACO

...rigidity

UPACO . . . a name recognized as a symbol of quality in all phases of adhesive manufacture. **UPACO** products **rigidly** conform to specifications for their particular uses and the line is completely **flexible** to meet any adhesive problem. You cannot do better anywhere.

UNION PASTE COMPANY
Hyde Park, Massachusetts

GENERAL FELT PRODUCTS
DIVISION OF
STANDARD CAP AND SEAL CORPORATION
68 Thirty-Fifth Street Brooklyn 32, N. Y.

Cheese Wraps Processed With **PROTECOTE***

Cheese Wraps processed with PROTECOTE embody the following characteristics:

- NO ODOR OR TASTE
- EXCELLENT MOISTURE-PROOFNESS
- HEAT-SEAL AT CHEESE PACKING TEMPERATURE
- GOOD CLING TO CHEESE
- ADEQUATE FLEXIBILITY AND ADHESION AT LOW TEMPERATURES
- RESISTANT TO CHANGES IN TEMPERATURES AND HUMIDITY
- SEPARATE FROM CHEESE CLEANLY
- HIGH STRENGTH
- STRONG HEAT SEAL
- NON-BLOCKING
- ATTRACTIVE TRANSPARENCY

PROTECOTE Cheese Wraps are available with or without printing.

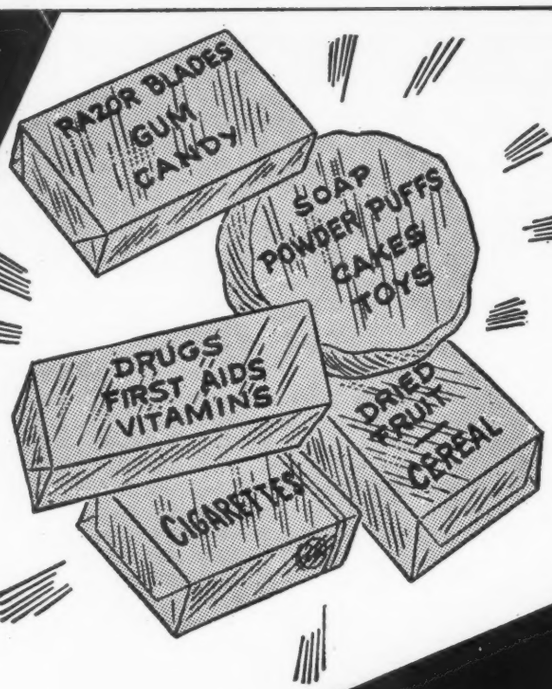
WRITE FOR SAMPLES AND QUOTATIONS

*Protective coating especially developed to preserve factory freshness of process cheese

Wrapped in
PROTECTIVE
Cellophane

•

at speeds up to
250 per minute

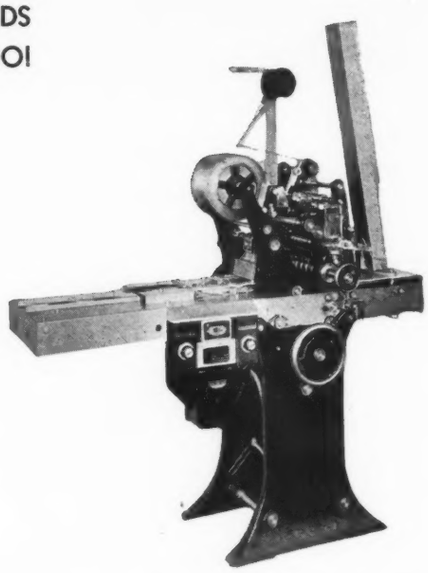


Especially suitable for volume production of small size

MOISTURE CONTROL DEPENDS ON PERFECT WRAPPING TOO!

WITH OR WITHOUT TEAR-STRIPS—

Scandia "tite-wraps" protect many of the finest products . . . and wrap them *fast*—and accurately.



*Manufactured under Bronander Patents.

SCANDIA* cellophane wrapping units are available for various standard sizes; various *types* of packaging. For VOLUME production, and for minimum of upkeep, be sure to "*see a Scandia work.*"

Scandia MANUFACTURING CO.

NORTH ARLINGTON NEW JERSEY

We're not new in Functional Papers

1919

when peace clouds . . . and milady's skirts rose higher

Thilmany *Originated Waterproof Asphalt Papers . . .*

TWENTY-SEVEN years ago we introduced asphalt treated papers as a water repellent safeguard and resistance barrier to moisture-vapor. This important contribution to industrial packaging now has innumerable applications. Today, these papers that keep moisture where you want it, have found employment in industry as weather protection shipping and storage covers, furniture and textile wrappers, machinery and stock pile covers, carton liners and numerous other uses.

The Thilco line includes WRAP-DRI . . . asphalt *laminated* papers and PETROCOTE . . . asphalt *coated* papers. Their range is unlimited in basic weights, treatments and finishes. String or mesh reinforcing is added where required. *Only* Thilco offers widths up to 10′ without seam or lap to leak moisture.

Thilmany is the leading producer of waterproof papers and is the only mill equipped with complete facilities for printing, embossing or converting into bags its great variety of asphalt treated papers.

Thilco Waterproof Papers Keep Moisture where you want it . . . In or Out

THE THILMANY PAPER COMPANY WAS FOUNDED 1883

THILCO *Functional* PAPERS

THILMANY
PULP & PAPER COMPANY
KAUKAUNA · WISCONSIN

Heminway Corporation • *(formerly Waterbury Paper Box Company)* Waterbury, Conn.
New York Sales Office • 30 Rockefeller Plaza, New York 20

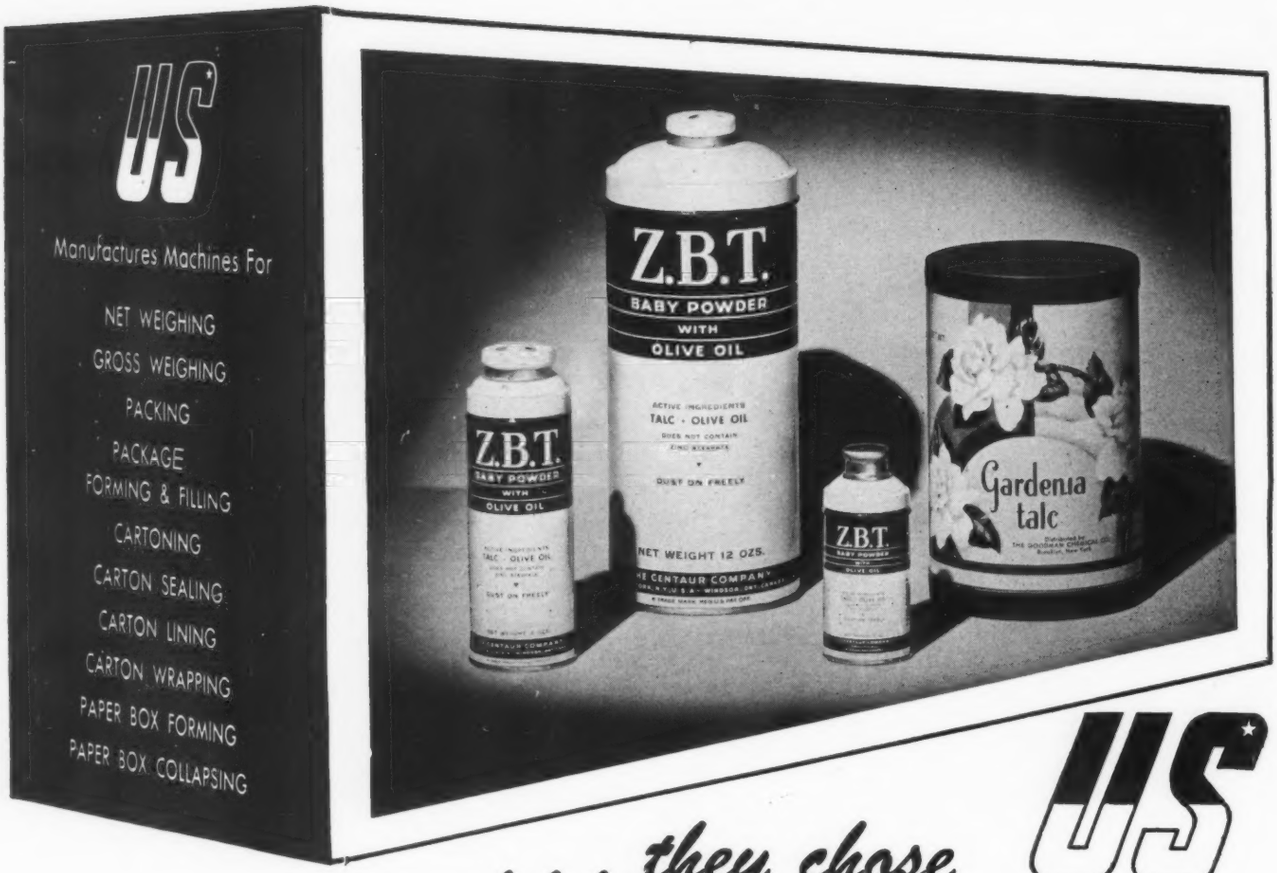
ROUND BOXES • SETUP BOXES • NOVELTY BOXES • PAPER CANISTERS • CATALOG PRINTING • DRAWN PAPER PRODUCTS

Naturally . . . dinner was good, its preparation made easier by her choice of glass packed foods. She's used to seeing what she buys, likes its fresh, appetizing look—a preview of taste to come.

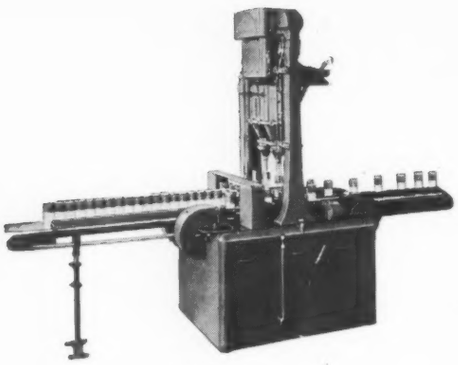
The coffee was good too. Naturally, our eye-minded homemaker looked for her favorite brand, its flavor retained at its blended best, in vacuum packed glass containers.

More coffee packers are discussing their problems with H-A—naturally.

HAZEL-ATLAS GLASS COMPANY
Wheeling, W. Va.



. . . they chose US



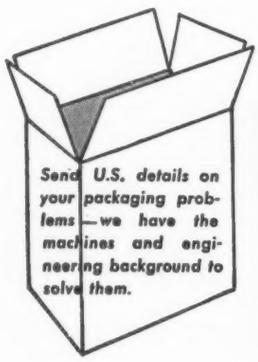
The NEW Model JK
Fully Automatic Volume Filler
Weigher or Packer

Manufacturers of the powders illustrated above economically solved their filling problems with **U S.** Using the new fully automatic, twin station Model JK Packer, you too can achieve dollar saving results. And operators will praise its clean, efficient operation and its many new features.

The Model JK fills with closest accuracy up to 60 containers per minute on all kinds of powdered and granular materials. Normally the operation of this automatic machine is to fill by packing under controlled pressure; for those materials that require settling rather than packing, the new vibrating filling platform is furnished.

An efficient dust collector hood at the filling stations collects any escaping particles, keeps the machine and surrounding air clean and free of annoying dustiness. This, combined with the new shut-off gates which eliminate the drip at the augers, makes the filling operation absolutely clean.

Combine the foregoing with other new features designed to provide efficiency in performance and convenience for the operator and you have a machine that is the last word in modern high-speed powder filling.



Send U.S. details on your packaging problems—we have the machines and engineering background to solve them.

US Automatic Box Machinery Co. Inc.

Owning and Operating

NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

18 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: NEW YORK CLEVELAND CHICAGO
LOS ANGELES (KRUGH EQUIPMENT & SUPPLY CO.)

THOUSANDS OF FOOD PRODUCTS OWE THEIR SHELF-LIFE FRESHNESS TO RHINELANDER PROTECTIVE PAPERS

Gimme a fresh one!

These little mimics learn young. Even tho play-acting, they express ideas born in the home where Mother, family food purchasing agent, is ever alert to the importance of flavor-freshness. Probably in no other country has food processing been carried to such heights. To maintain this peak condition in packaged edibles over extended periods of storage and store-display requires highly functional enclosures; in particular, flexible wrappers, bags and carton liners resistant to moisture, vapor, oil or grease transmission.

Because Rhinelander Protective Papers possess these characteristics to the highest degree, they are preferred by America's leading paper converters. To meet variables in product and environment, they are produced and made in wide diversity. Nearly a half century of specialization and a vast fund of "know how" enables us to provide proven papers of unsurpassed integrity. It is these facts that have caused so many of the Nation's provisioners to protect the quality of their products with Rhinelander Packaging Papers.

RHINELANDER *Protective Packaging* **PAPERS**

Moisture/Vapor-Proof Coated Glassines
Wet Strength Glassines
Wet Strength Greaseproof
Heat Sealing Coated Glassines

Lard and Shortening Liners
Packing Industry Wrappings
Genuine Greaseproof
Specialty Bag Papers

Confectionery Papers
Cereal Wrapping Papers
Coffee Bag Papers
Cracker Box Liners

Laminated Greaseproof Papers
Wax Laminated Glassine
Greaseproof Innerwraps
Opaque Label & Bag Glassine

RHINELANDER PAPER COMPANY • MILLS AT RHINELANDER, WISCONSIN, U.S.A.

New- REYNOLDS

A. Reyseal used as a heat-sealed overwrap for cartons or boxes.

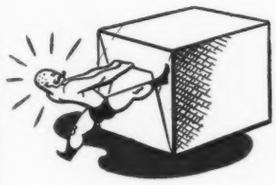
B. Heat-sealed Reyseal bag for hard candies or other products.

C. Gleaming individually wrapped packages in attractive display foil cartons.

D. Foil used as an intimate wrap for individual tablets.

REYSEAL WRAP...

for heat-sealed quality protection plus Sparkling Display



1. HEAT SEALS TIGHTLY AND THE SEAL STAYS CLOSED

When heat is applied to surface, wax bleeds through porous tissue to form a tough fiber-reinforced, leak-proof seal.

2. MOISTURE VAPOR CAN'T GET IN . . . OR OUT

A thin metallic shield of pure aluminum forms a positive barrier to moisture-vapor transmission . . . no dehydration . . . no added moisture can get in from outside.

3. DESTRUCTIVE LIGHT RAYS TURNED ASIDE

Light rays harmlessly bounce off Reyseal . . . no loss of flavor . . . no discoloration.

4. THEY REACH FOR THE SPARKLE OF FOIL!

Reyseal with foil surface outside gleams and sparkles from the shelf . . . attracts and sells customers.

YOUR PRODUCT *looks* better and *keeps* better when wrapped in Reyseal. For confectionery, frozen foods, soap, tobacco and many other items, Reyseal offers outstanding advantages never before available in a flexible packaging material.

Reyseal is a thin laminated sheet combining aluminum foil, paper base, wax and an outer layer of porous tissue. Reyseal can be used as an overwrap for cartons; as an intimate wrap for individual packages, and as a sealed bag for hard candies or similar products.

Reyseal can be tailored to your taste and needs. It can be thick or thin . . . the foil surface can be outside or inside. Beautiful full-color reproductions can be printed right on the foil itself adding sparkle and luster to the package.

Reyseal is easy to handle and economical to use. It may be applied by hand or by fully automatic equipment designed for heat sealing. For further information, write Reynolds Metals Company, Foil Division, Richmond 19, Virginia.

REYNOLDS ALUMINUM FOIL

733

HEEKIN CANS

With Harmonized Colors

THE HEEKIN CAN COMPANY, CINCINNATI, O.

FINER LITHOGRAPHED CANS OF METAL SINCE 190

AVAILABLE IMMEDIATELY!

FOOD-SAVING FROZEN FOOD CONTAINERS

with Pliofilm BAGS the first truly liquid-tight containers.

T.M. REG. THE GOODYEAR TIRE & RUBBER CO.

WEST-CHIX Pliofilm POULTRY BAGS

FOR CHICKENS AND OTHER SMALL FOWL

- Generous size . . 8″ x 3″ x 15″ inside dimensions
- Packed 50 bags to a box
- 500 bags to a shipping case

WEST-TURK Pliofilm POULTRY BAGS

FOR TURKEYS OR LARGE FOWL

- Size 12″ x 6″ x 22″ inside dimensions
- Packed 50 bags to a box
- 500 bags to a shipping case

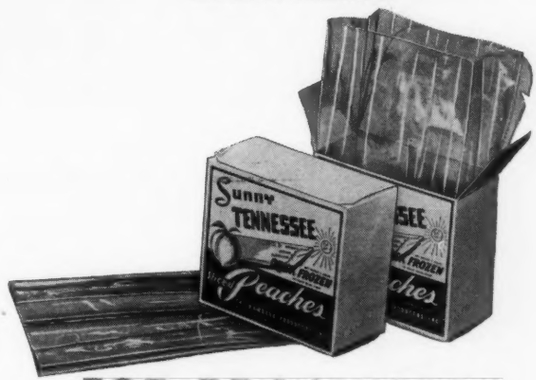
The first "tailor-made" gusset type bags especially designed for the frozen storage of poultry and fowl. They are easier to use, quicker to fill, stronger, and provide sure, safe protection. May be heat sealed with ordinary iron or twisted and tied.

Commercial packers will find West-Chix and West-Turk give their product the added appearance value that promotes sales.

Pliofilm is

T.M. REG. THE GOODYEAR TIRE & RUBBER CO.

- **Liquid-Tight • 100% moisture-vapor proof • Tough—pliable**
- **Water-proof, moisture-proof**
- **Resistant to fruit acids • Easily and quickly heat sealed—makes a positive LIQUID-TIGHT closure**
- **Transparent • Grease-proof • Protective —prevents "freezer burn," dehydration, shrinkage • Frozen foods may be reheated right in the Pliofilm bag—no loss of flavor or vitamins.**



FOR PROCESSORS

Pliofilm BAGS WITH CARTONS

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truly *liquid-tight* containers.
Easy to fill . . . easy to seal

Write today } WESTERN PRODUCTS, INCORPORATED

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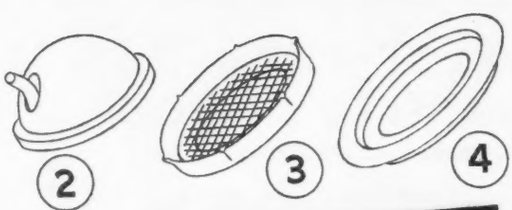
Sefton MAKES MUCH OF A "LITTLE PUFF" FOR SAFEWAY

Safeway Chemical Company helps win a place for its products in the market by clever packaging. Neat, clean, tight...this can delivers the insect powder to the consumer...and dispenses it, too. Each product you produce is a challenge in packaging. Do a better job than the other fellow and you'll sell more. We invite you to let Sefton Fibre Can help you now.

See how it's done!

Making the closure for this fibre can is the trick. Four parts are used:

1. The empty can body ready for filling.
2. The rubber dome with plastic tube inserted.
3. The metal cup which holds the dome and locks into the top edges of the fibre can.
4. The metal top which is a precision fit with metal cup to hold rubber dome and which seals the can when the flange is crimped over.



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Western Packer adopts Prime-Pac for 25-lb. carton packs!!

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Southern Packer adopts Prime-Pac bags for frozen shrimp!!

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SUCCESS STORIES OF AMERICAN BUSINESS

P. LORILLARD CO.

Built in 1840, eighty years after Peter Lorillard first established his tobacco business on this site, this fine old Lorillard stone mill still stands in the Botanical Gardens, Bronx, N. Y.

There is a span of nearly 200 years between the founding of the P. Lorillard Company on the site where that old stone mill still stands, and the ultra modern, spotless P. Lorillard factory shown above.

But through all these years, one thing has never changed . . . the traditions and principles which guide the making of every product bearing the Lorillard name.

For Peter Lorillard was a *master artist* at his trade. Like his friends, Gilbert Stuart, the painter, Paul Revere, the silverware craftsman, Duncan Phyfe and James Adams, great furniture designers, Peter Lorillard was a creator of standards of *lasting* quality. He considered no detail, no refinement too small in the improvement of his products.

It is this Lorillard devotion to *details*—after nearly 200 years of tobacco experience—that has made Lorillard's Old Gold the superb cigarette it is today. And it is those same high standards of craftsmanship that have made America's oldest tobacco name an assurance of quality in every Lorillard product on the market.

HOW LORILLARD USES RIEGEL FUNCTIONAL PAPERS

Numerous Lorillard chewing tobaccos . . . headed by the famous Beech-Nut brand . . . rely on Riegel's Diafane for product protection.

Many Lorillard pipe tobaccos use other special Riegel papers for packaging and moisture retention.

In addition, many Riegel printing and converting papers find a place in Lorillard's modern plants, through leading producers of office equipment who rely on Riegel Papers for the manufacture of index systems, file folders, time cards and related items.

Riegel Papers

FOR FUNCTIONAL PACKAGING

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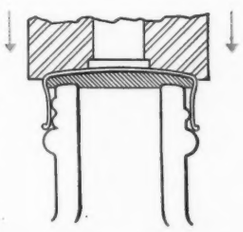
Rubbing Alcohol is *locked in* by R-O SEALS

You will find no alcoholic cloud hanging over the Alseco R-O Closures that seal the many private label brands of Rubbing Alcohol produced by The Rabin Company, of Los Angeles. Evaporation losses are cut to the bone by the Alseco Roll-On method of tailor-making each seal to fit its own bottle.

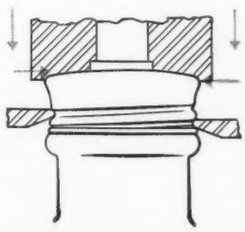
Now that aluminum is again available, you will want to find out all about Alseco Aluminum R-O's for your bottled products. These easy-to-open seals can be lithographed in all colors to add punch and sales appeal to your packages. We'll be glad to put our 32 years of sealing experience at your service. Write us.

THIS WORKS BEST WITH ALUMINUM

1. Plain-skirted Alseco Seal is seated squarely on container. Under stationary top pressure, container lip is embedded in cap liner evenly all around, effecting the seal.



2. While the seal is thus held under pressure, threads are Rolled-On to conform exactly with threads on container. Each seal is tailormade, fits perfectly, seals tighter.



ALSECO SEALS AND SEALING MACHINES

TAILOR MADE OF ALCOA ALUMINUM

ALUMINUM SEAL COMPANY • • • NEW KENSINGTON • PENNSYLVANIA

SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA • • • • • SALES OFFICES IN LEADING CITIES

Paint comes out of this tube in buckets!

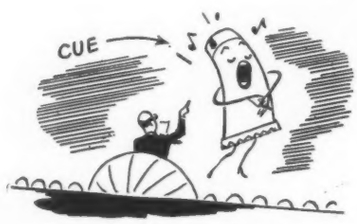
Yes, *buckets.* Here's the interesting story.

Almost since the time of Michelangelo, one of the biggest headaches of the paint business has been the problem of stocking the tremendous number of required shades of color. You can see what a headache this would be.

But what the makers of Murphy Paints* couldn't see was why this unhappy state of affairs should continue. Suppose, they asked, some enterprising paint manufacturer packaged the different tinting pigments in small one-shot containers. Wouldn't that make it possible for dealers to carry little more than basic white paint? And wouldn't that make practically any color available at any time—simply by adding the contents of these individual containers to the white paint?

Murphy had the first *new* idea in paint merchandising in 50 years—*but* they were then faced with another problem: finding satisfactory containers for these pigments.

That was our cue. We of Sun Tube suggested our wonderfully convenient one-shot tubes, known as Unitainers. The Murphy people decided to give them a try—with results that made packaging history in the paint field.



MEANING WHAT TO YOU?

How does this story affect *your* business? If you have a packaging problem, Sun Tube may provide just as happy a solution for you. Not necessarily with a Unitainer (this particular Sun Tube may not be suitable), but with a tube designed precisely by our engineers to meet your individual needs.

You know, of course, that the collapsible tube has certain unique advantages. You know that it's virtually unbreakable. That its contents won't dry out in use. That it's germ-proof and light-proof.

But did you know that new developments make Sun Tubes ideal containers for products never before put in collapsible tubes? And that the ingenuity and resourcefulness of our packaging engineers can go to work on your problem—whenever you say the word?

Think of the advantages that perfect packaging will give your product in the dead-earnest race for distribution that's coming—then contact Sun Tube's main office, 181 Long Ave., Hillside, N. J., or our nearest representative.

**Interchemical Corporation, Murphy Paint Division.*

Sun Tube Corporation

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papers
ESTABLISHED 1846

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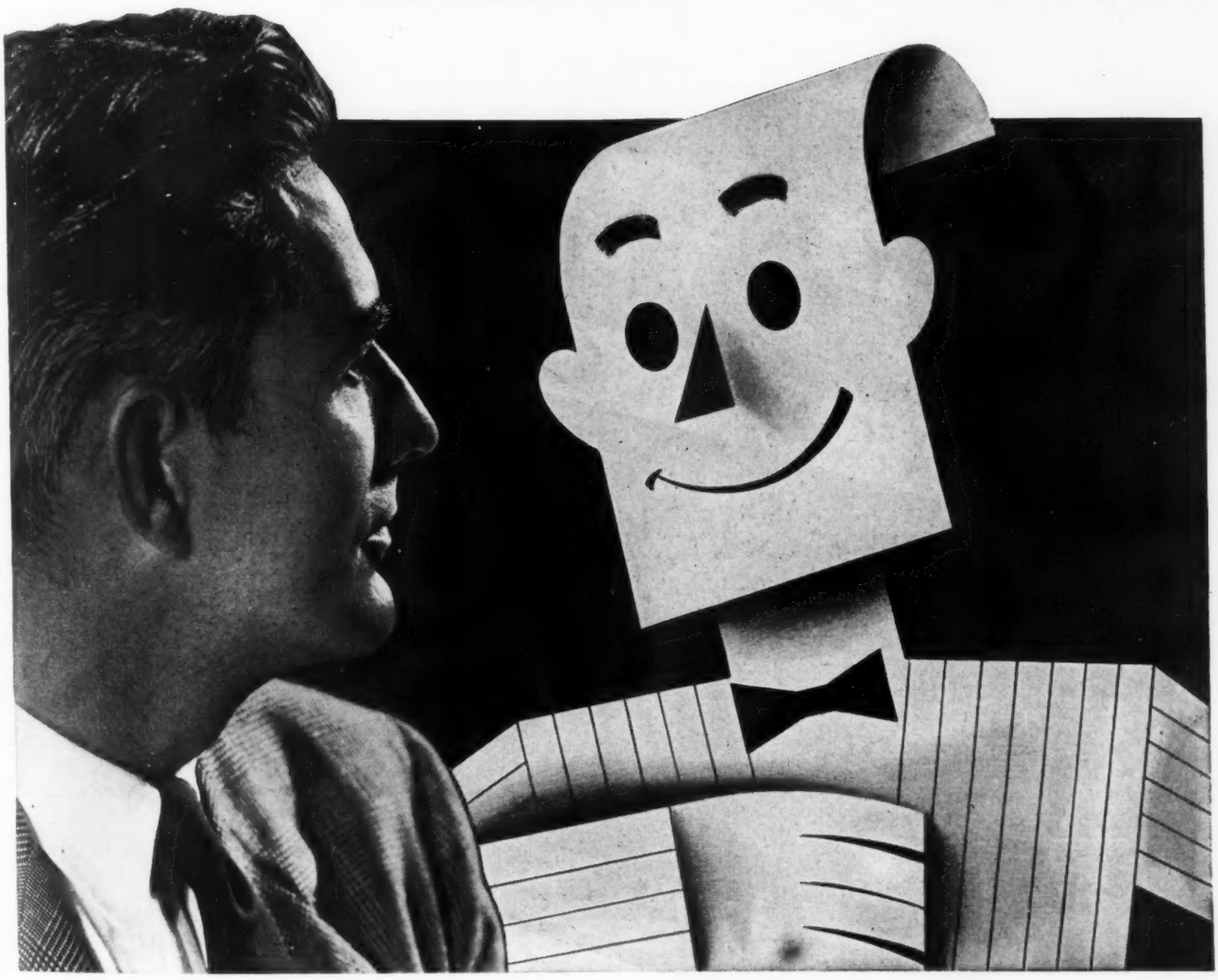
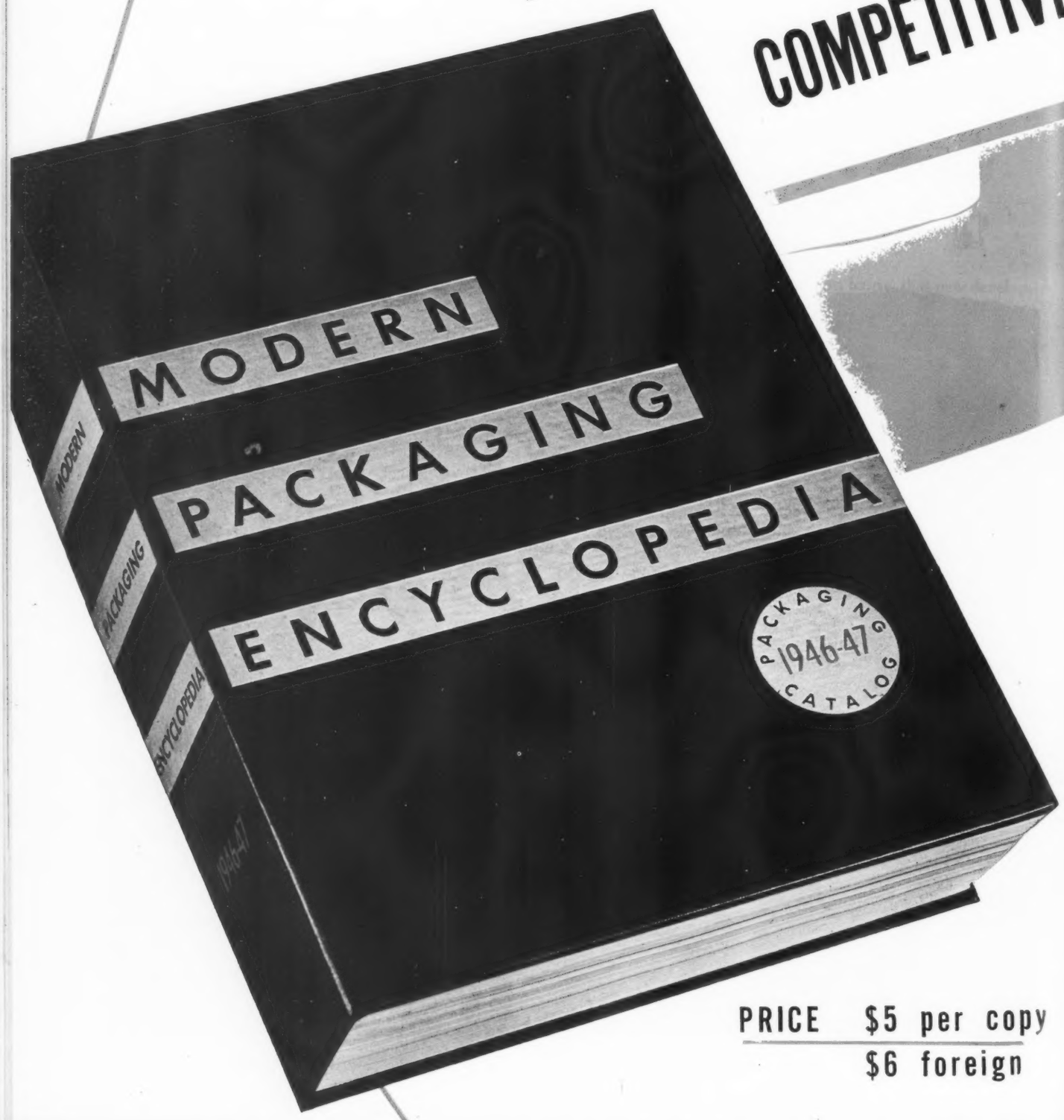
If your products and profits suffer from humidity, heat, cold, vapors, grease, gas, mould (you name it), it's high time you and the Mead Paper Man put your heads together. At the business of developing functional papers for any purpose, he's a whiz. He isn't immodest enough to claim that he can come up with the paper answer to any problem you might have, but he has the know-how, the resources, and the facilities to try. For he's the research laboratory of the Mead New Products Division. Try him out. He is with one of America's most versatile paper manufacturers, now rounding out its first full century of experience.

NEW PRODUCTS DIVISION

THE MEAD CORPORATION **CHILLICOTHE, OHIO**



AIMING DIRECTLY AT PEACETIME COMPETITIVE



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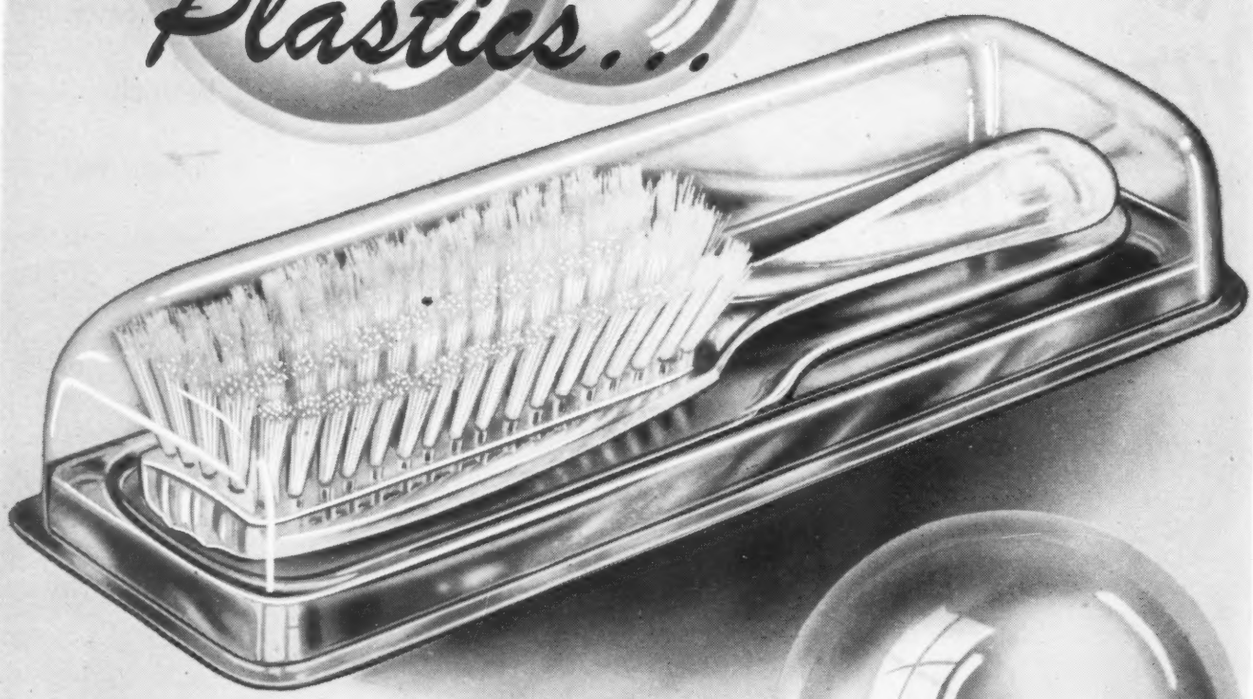

All Shapes
All Protected
All Textures

ALL manner, shapes and textures of eye-attracting packages can be and are being produced by us in plastics. And plastics then sells the product right through the form-fitted covers. The National Transparent Plastics Company, through war-time research and experience, has developed Plastic Packaging so that it now can compete successfully in price with other types of boxes, yet exceeds all in sales appeal.

NATIONAL TRANSPARENT PLASTICS COMPANY

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COMBINATION PAPER-AND-METAL CANS

FIBRE DRUMS The Container Co., Van Wert, Ohio

Sales offices in all principal cities

. . . and Continental *is* big! The Paper Division alone makes four distinct lines of packages . . . Mono nested and cylindrical containers, fibre drums and paper-and-metal cans. Whatever your product, you'll find a Continental container designed to meet your most exacting requirements.

For some time now we haven't been able to make enough containers to go around. But we have stuck to our policy, "the best in *quality*, the best in *service*." So when you plan ahead, think of Continental, packaging headquarters for industry.

The packaging that attracts . .

Good looks and plenty of eye-appeal is taken for granted by ACE Carton clients. And now for the competitive days ahead, they'll continue to depend on ACE to come up with creations that command shelf space—provide rapid turnover. Consult ACE design engineers about your packaging problems—cash-in on this wealth of craftsmanship and "know-how" planning.

ACE CARTON CORPORATION

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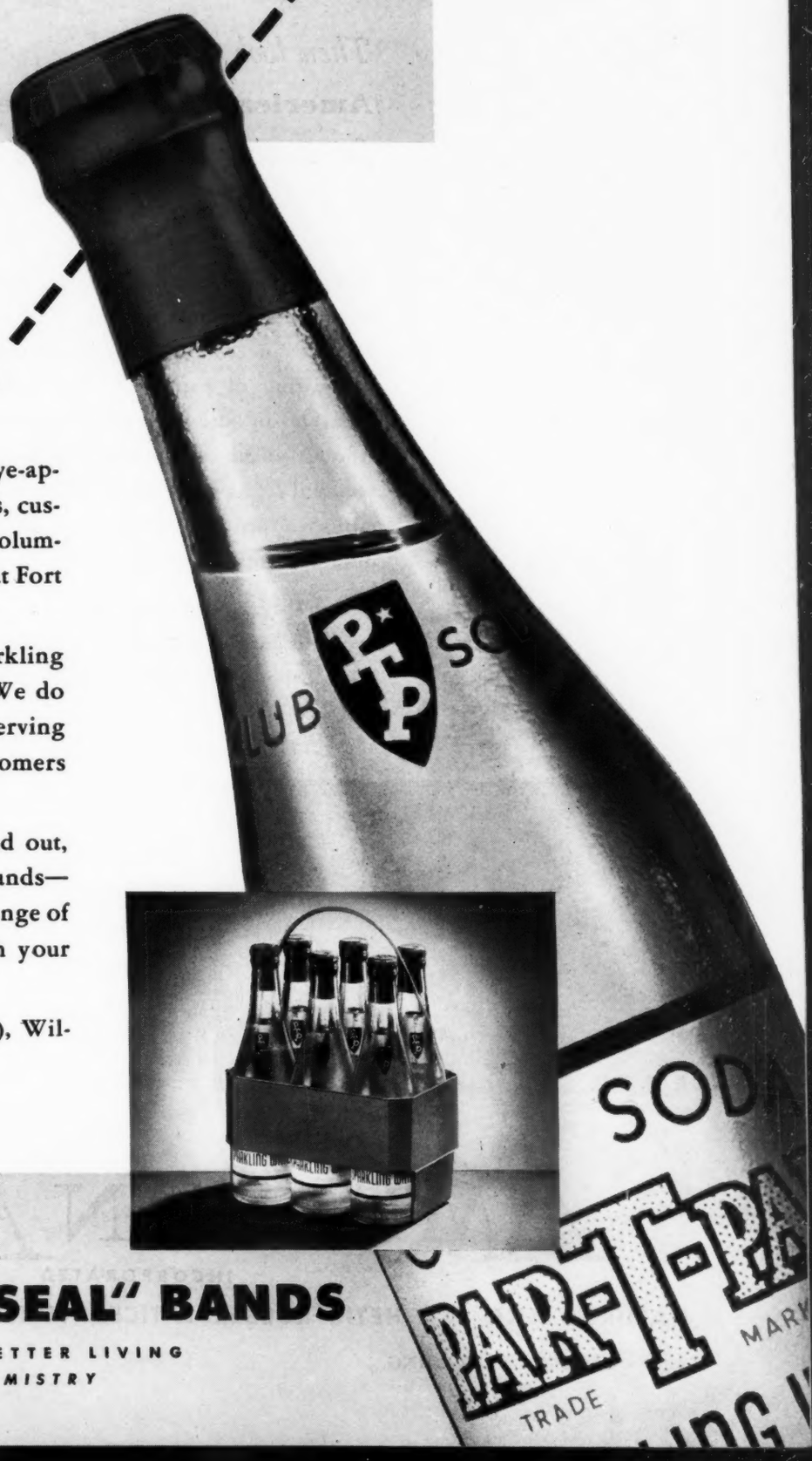
FOLDING PAPER CARTONS · FOLDING DISPLAYS · DISPLAY CONTAINERS

ACE CARTON CORP. ACE CHICAGO Creators

"Cel-O-Seal" Bands Make the Deciding Difference,

SAYS OFFICERS' CLUB MANAGER



ANOTHER REASON FOR CEL-O-SEAL

REG. U. S. PAT. OFF.

"The 'Cel-O-Seal' bands supplement the eye-appeal of the bottle," says Mr. Leo F. Thomas, customer of the Nehi Beverage Company of Columbia, S.C., and manager of the officers' club at Fort Jackson, S.C.

He comments: "Many specify this sparkling water because of the 'Cel-O-Seal' bands. We do not remove the 'Cel-O-Seal' bands when serving patrons, as they help to impress upon customers the quality of the beverage."

If you want to make your product stand out, seal with colorful Du Pont "Cel-O-Seal" bands—the mark of quality. They come in a wide range of colors . . . can be indelibly printed with your name or sales message.

E. I. du Pont de Nemours & Co. (Inc.), Wilmington, Delaware.

DU PONT

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DU PONT "CEL-O-SEAL" BANDS

BETTER THINGS FOR BETTER LIVING
. . THROUGH CHEMISTRY

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Do you want to make a *better product* at a *lower cost?*

Then look into

American Anode latices and mixes

for coating and impregnating paper . . .

Without question, during the next few years the most important technical advances in the coating and impregnating of paper will be made possible by the use of American Anode latices and water mixes—*if* you will let us work with you on established products as well as new developments.

There has been so much recent progress in this field that it's doubtful if paper chemists and engineers have been able, in these busy days, to keep abreast of it.

There's ample evidence that in many cases we will be able to help you make a *better* product at a *lower* cost. Certainly, manufacturing will be simplified because water systems are inherently uncomplicated. They're materially safer, too; no dangerous explosive solvents; no cumbersome and expensive solvent recovery systems.

Latices and mixes of natural and synthetic rubbers, GEON, HYCAR, neoprene, and Saran are available from our bulk storage. For more information about the *modern* way to coat and impregnate paper, please write Department AC-9, American Anode, Inc., 60 Cherry St., Akron, O.

The American Anode laboratory in Akron is equipped with the latest and most modern paper testing equipment, and is staffed with people who know how to use it.

AMERICAN ANODE

INCORPORATED

NATURAL AND SYNTHETIC RUBBER LATICES, WATER CEMENTS AND SUSPENSIONS

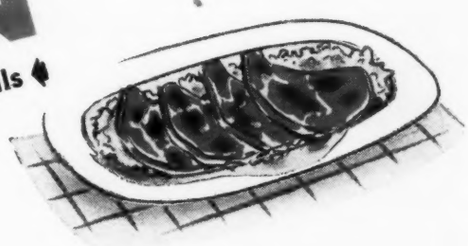
"These chops look good! Let's have some tonight."

Those colorfully-wrapped chops have certainly stimulated Father's appetite—and buying urge. He reacts quickly to the attractive design processed by Dobeckmun on transparent film packages and overwraps. Better still, he'll buy again because he appreciates how flavor, tenderness and quality are so faithfully safeguarded in Dobeckmun packages.

The Dobeckmun Company, Cleveland 1, Ohio. Branches at: Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, San Francisco and Seattle. Representatives everywhere.

DOBECKMUN

Self-selling packages in processed films and foils



JAR CLOSURES! IMMEDIATE DELIVERY!

A diversity of colors, styles and sizes including standard 33, 38, 43, 45, 48, 51, 53, 58, 63, 70, 83 and 100 mm.

They're here! Plastic molded jar closures are now in full production . . . and at a lowered price scale! New MACK MOLDING automatic set-ups permit greater production economies and efficiencies.

They're good! Plastic molded closures combine rigidity and strength with smart lustrous eye-appeal. They are sanitary, non-corrosive and easily cleaned.

They're accepted! Easily removed, easily replaced—just ask the customer. Write, wire or telephone us about your requirements; your inquiries will be treated in confidence.

If you are not already acquainted with the facilities offered by our three complete and up-to-date plants, the new 8 page booklet "MACK MOLDED EXCELLENCE" will be sent on request. Write for your copy today.

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EXCELLENCE

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Like a Circle, Betner *Packaging Service* *is* COMPLETE!

Users of Betner bags and Betner service read like a blue book of the food industry.

Some may use only a Betner made bag. Others may ask Betner artists to do them a bag design, have Betner printing presses print it on their bags. And still others have Betner install the modern Benco machinery, which loads and seals their product at peak speed, efficiency and economy.

From idea to package to finishing room, Betner service is complete. You are invited to use it—all or part. Inquiries invited, no obligation.

Benj C Betner Co DEVON, PA.

BENJ C BETNER CO OF CALIFORNIA, LOS ANGELES, CAL.

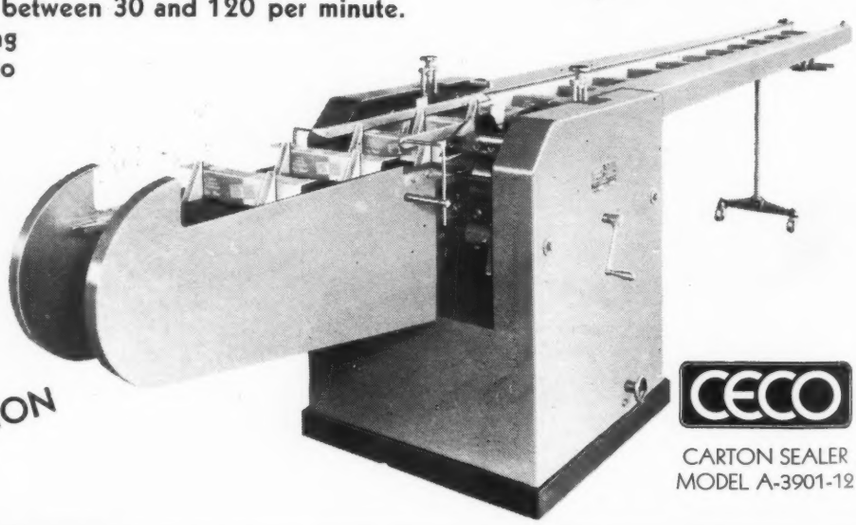
All IVINS Packages Sealed on CECO Adjustable Carton Sealers

An excellent testimonial for CECO Adjustable Carton Sealers is a letter just received from Mr. Frank H. Reagle, Superintendent of J. S. Ivins' Son, Inc., Philadelphia, Pa.

Saves Labor
Easily Adjusted
Simple to Operate

"Since first purchasing two Ceco Sealers in 1943, we have converted practically all of our packages to glue end sealing and as you know, purchased a third Ceco Sealer early this year. In addition to doing an excellent sealing job on all our cartons, which operation has saved us a sizeable amount of labor and payroll dollars, the Ceco Sealer is so easily adjusted and so simple to operate that one girl in our plant now has charge of the operation of our three sealers."

The CECO Adjustable Carton Sealer is ideal for packaging a wide variety of carton sizes such as the Ivins line comprises. This machine handles any free-flowing, non-sifting product, and produces clean, square, tamper-proof cartons, glued simultaneously and automatically on both ends at speeds between 30 and 120 per minute. Send for new bulletin describing valuable features just added to CECO Sealers.



CARTON SEALER
MODEL A-3901-12

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Packaging Machinery Specialists

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CHICAGO • TORONTO • BALTIMORE • ST. LOUIS
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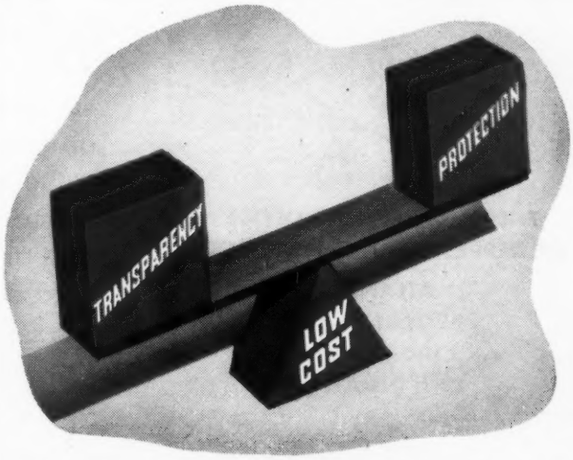
STOP THE SHOPPER. Confronted by a wide variety of products, the shopper relies mostly on her eyes to pick the best values . . . often makes extra purchases on *impulse*. Transparent packaging presents your product at its best . . . tells a convincing sales story that attracts, suggests, convinces.

PROVIDE PROTECTION. Repeat sales of food products depend on the verdict reached at the dinner table. Sanitary, moistureproof Du Pont Cellophane helps assure peak product quality at the point of use . . . safeguards the flavor and freshness of foods that brings satisfaction to the consumer.

FIT YOUR BUDGET. That's the final test of an effective package. Alert manufacturers are scrutinizing all aspects of marketing costs and looking for the package that will do a proper merchandising and protective job efficiently and economically.



THE RIGHT BALANCE of packaging factors is available in Du Pont Cellophane. It provides sales-building transparency plus necessary protection—*at lowest cost*. The demand for Cellophane still exceeds the supply, but we hope our converters and ourselves can soon supply all needs.

Write for new booklet, "Design for Selling," a study of consumer buying habits in super markets. E. I. du Pont de Nemours & Co. (Inc.), Cellophane Div., Wilmington 98, Del.

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NO bottled product can go far on the road to brand leadership without good, reliable sealing. The success of the package—and the product—depends on the reliability of the cork seal.

Out of the scores of grades of cork from which bottle closures may be made, Mundet selects those grades that assure safe sealing. Since requirements differ according to the nature and use of the product, Mundet Cork Closures include many types and styles. Made from prime "pedigreed" cork, chosen from the world's best growing areas, Mundet Cork Closures are remarkably durable. Highly resilient, their efficient sealing action can be depended upon to protect the product during extended use. Write for information on types of corks best suited for your products. Mundet Cork Corporation, Closure Division, 65 S. 11th St., Brooklyn 11.

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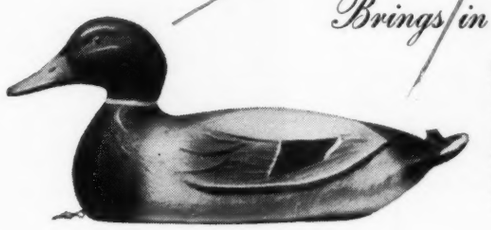
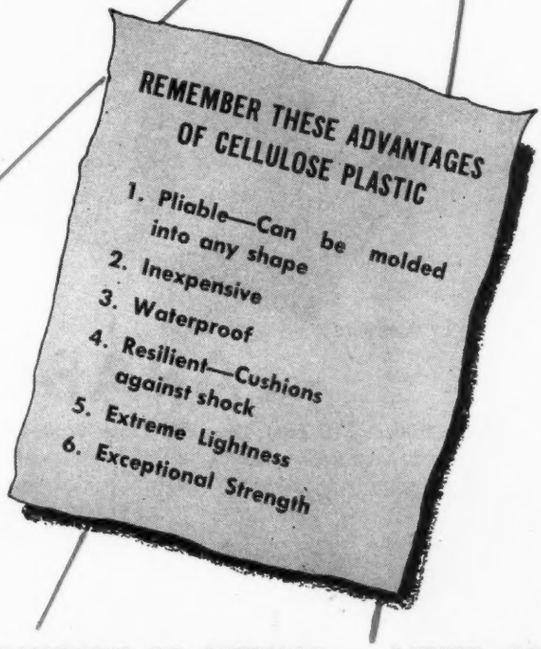
This CELLULOSE PLASTIC DECOY *Brings in the Ducks*



Duck hunters are enthused about Victor Veri-Lite Decoys manufactured by Animal Trap Company of America. They are lifelike . . . exceptionally light and sturdy . . . absolutely waterproof because they're cellulose plastic.

This CELLULOSE PLASTIC CONTAINER *Brings in the Ducats*

"Timber," a line of men's toiletries by the Maurella Products Co., is appropriately packaged in a cellulose plastic container resembling the bark on a tree.



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Do you prefer new, exciting designs? Or simple standard patterns? Whatever your preference, we can help you create a package that will make your product more appealing to the customer. Write for complete details.

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NOW OVER ~~53~~ 94 ~~26~~ ~~17~~ MILLION VICKS PACKAGES USED YEARLY

"Your quality and service keep pace with our ever-growing needs"

PIONEERING
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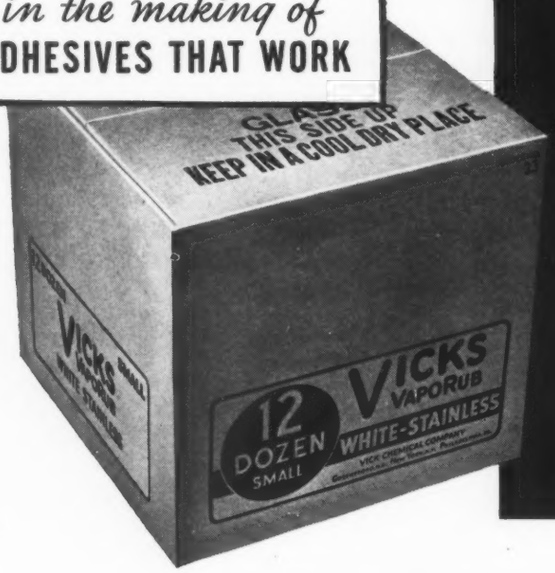
ADHESIVES THAT WORK



The popularity of Vick Products has multiplied many times since their first public announcement of "17 million packages used yearly." For 20 years, Arabol Adhesives have been used for the labeling, packaging and case-sealing of these famous products.

Arabol takes pride in a recent statement from Vick Chemical Company: "Arabol Adhesives are dependable allies in our business. Your quality and service keep pace with our ever-growing needs."

Arabol serves the leaders in a hundred industries — with specification adhesives for each particular requirement in manufacturing, packaging, labeling and case-sealing. See the Arabol Representative when he calls; he knows adhesives.

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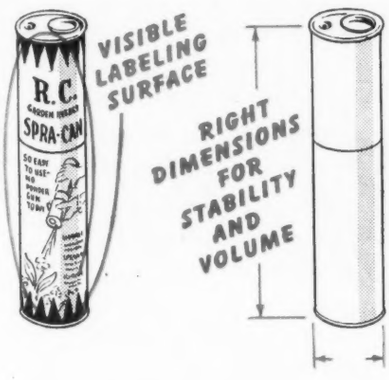
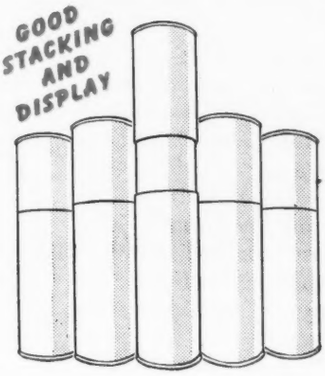
THE CONTAINER WITH A·C·T·I·O·N

It sprays *perfectly* in any position—*at any angle*—up or down.

When specifications call for a container for packaging and for spraying or dusting non - abrasive powders—here is the R.C. "Spra-Can" that does the job perfectly and meets many packaging requirements.

IT PACKAGES AND SPRAYS NON - ABRASIVE POWDERS





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Whatever your packaging problem may be—consult us for the answer in fibre cans. The versatility of R. C. Fibre Cans make them adaptable to all phases of packaging.

Call on R.C. Can *package-engineering* to produce the design and container best suited to your needs.

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Manufacturers fibre cans, tubes, spools and cores

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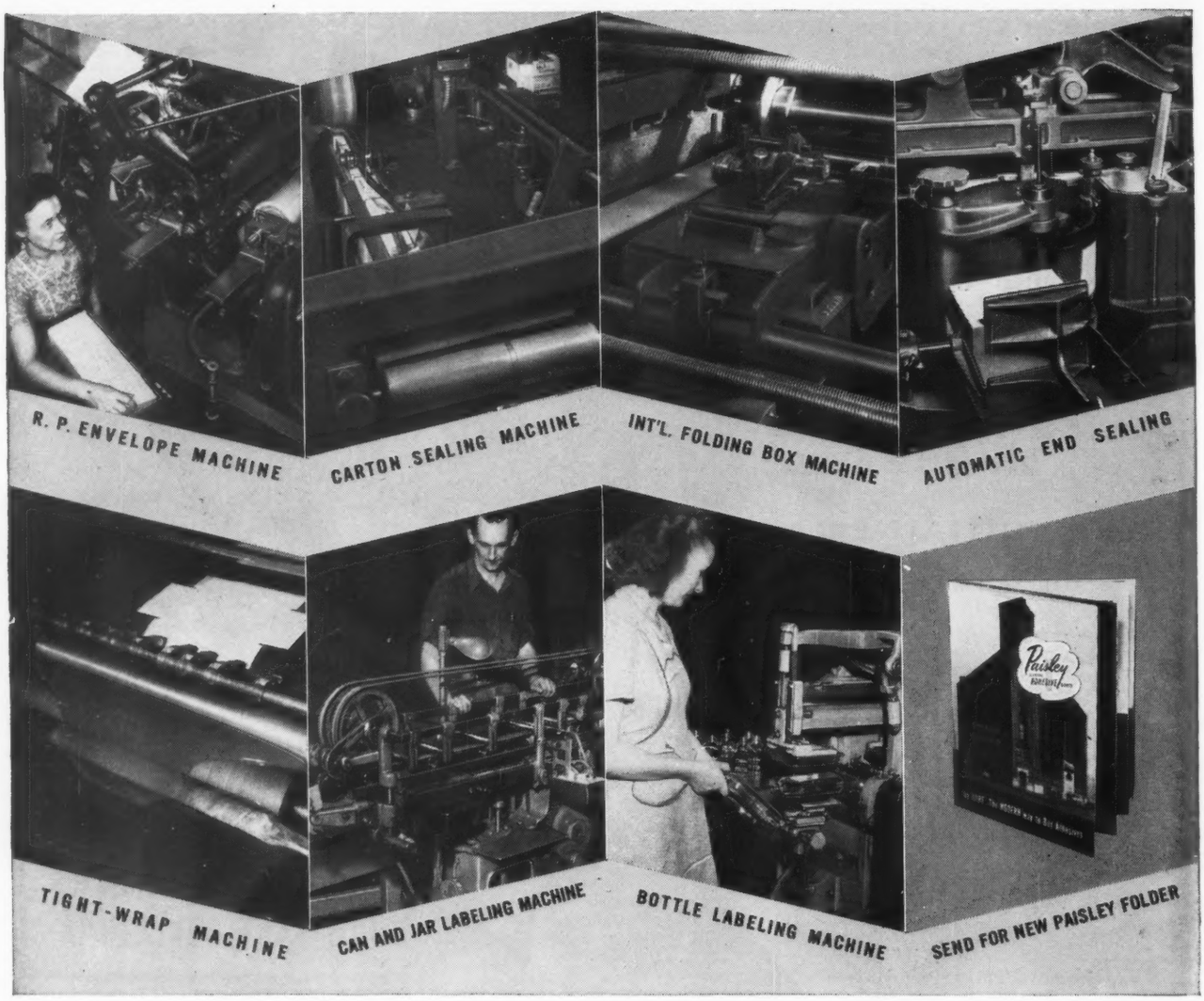

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WHEN YOU USE . .

WHATEVER your adhesive operation "Put it up to Paisley!" Regardless of (1) the type or speed of machine or hand operation; (2) kind of materials to be bonded; (3) type of container surface to be sealed or labeled, or other consideration; you can depend upon our laboratories to develop the *one best* Adhesive for the job. Determining the formula and maintaining absolute quality control in each succeeding shipment, will not cost you one penny more. We invite you to use this *free* Paisley Scientific Adhesive Service. Just send for our Adhesive Operation Data Sheet. It's a very convenient form which you fill in and return. Upon receipt, our skilled adhesive engineers will quickly study your problem and make specific recommendations. If you want *better results* in your gluing or packaging operations, don't wait . . write for your Data Sheet TODAY!

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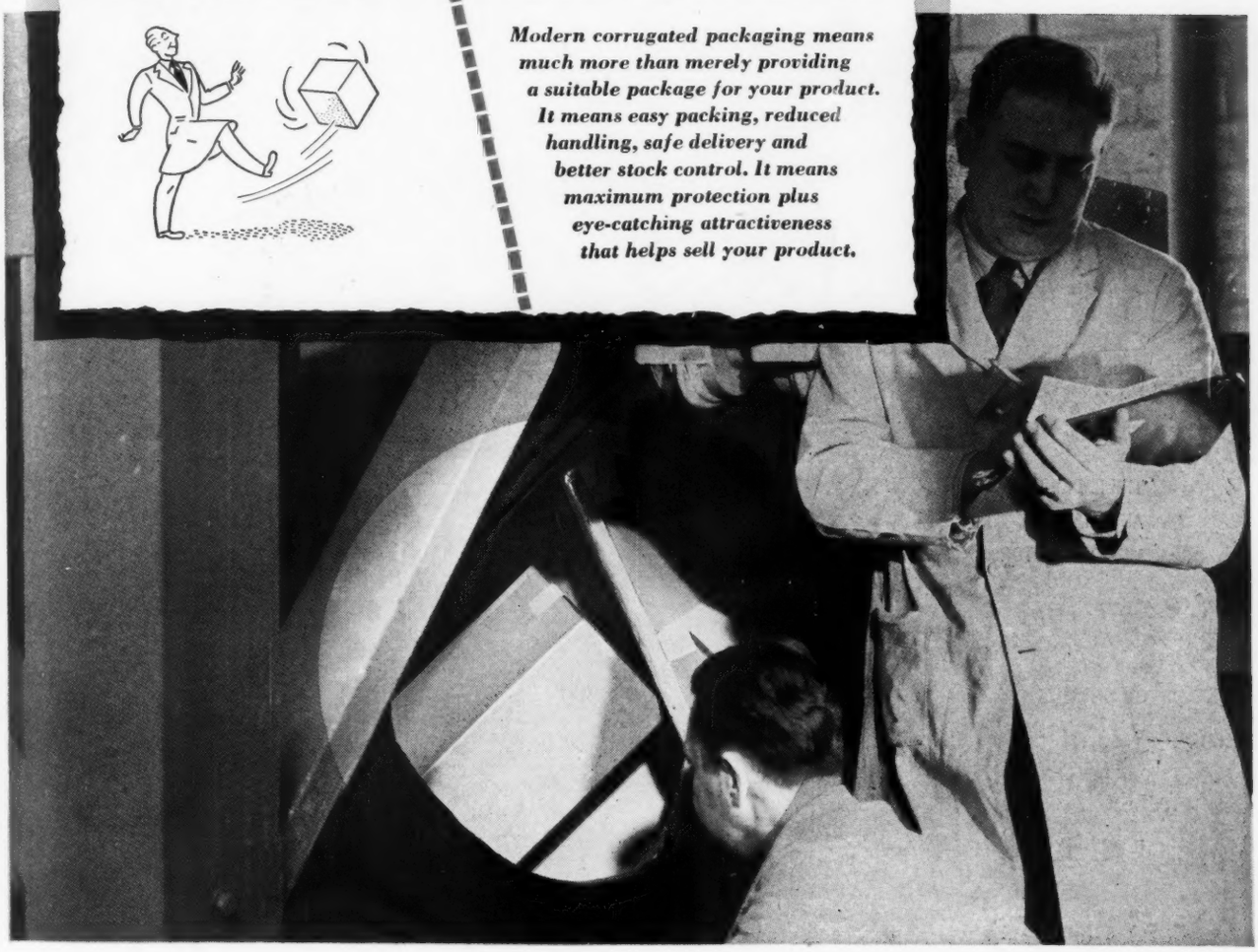
BETTER "KNOW-HOW" ...than "Guesswork"

Modern corrugated packaging means much more than merely providing a suitable package for your product. It means easy packing, reduced handling, safe delivery and better stock control. It means maximum protection plus eye-catching attractiveness that helps sell your product.



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Prepare your new package design *now*. Then, as soon as raw materials again become readily available, you can *quickly* cash in on your products' full potentialities. A corrugated shipping box can be engineered in the H & D Package Laboratory to meet your particular packaging problems. Here "know-how" is based upon experience and research. Here thousands of corrugated boxes, large and small, are designed and engineered to meet every conceivable packaging situation, at the factory, in transit, in storage, at point-of-sale, in the hands of the consumer. Let the H & D Package Laboratory show you the advantages of modern corrugated package engineering. "How to Pack It" tells the complete story. The Hinde & Dauch Paper Co., Executive Offices, 4611 Decatur St., Sandusky, Ohio.

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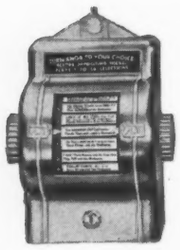

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AUTOMATIC
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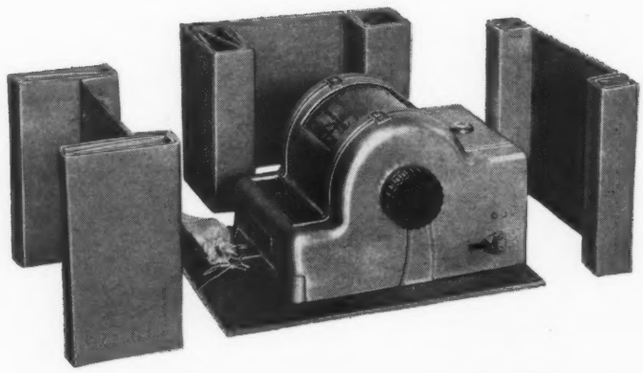

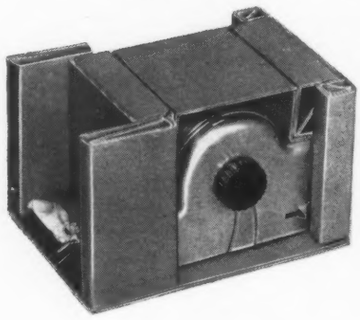

IN A

"Package by Inland"

★ An odd shaped, Precision Electrical Instrument—difficult to ship—safely.

★ Note the bracing and cushioning of this delicate commodity.

★ There's a way to pack and ship everything with safety—

PACKAGE BY INLAND

INLAND
CONTAINER CORPORATION
Corrugated Fibre Boxes

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There's nothing like fine color reproduction to tempt the palate and tap the pocketbook. That is why leading food advertisers repeatedly call on "U-S" to produce their outdoor posters, point-of-purchase displays, booklets, folders, cartons and labels featuring delicious food products of every description. They want . . . and get . . . the kind of creative design and quality reproduction of their advertising and packaging materials that stimulates consumer appetite . . . and captures consumer food dollars. If you have "good eating" for sale and want to give your prospects a sales tempting taste pictorially . . . then call on "U-S" for full color advertising and packaging materials.

This color subject originally reproduced at U. S. P. & L. on outdoor and point-of-purchase posters and car cards for The John F. Jelke Company.

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Man's accomplishments are limited only by his imagination. Everything needed for lunar flight is right here on this earth.

In packaging, too, you set your own limitations. So imagine the smartest new package you can. Here at NASHUA you'll find all the basic materials. Combine them with your own ingenuity and you will have a thrilling new package that soars to undreamed of sales heights.

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MODERN PACKAGING

VOLUME 20 SEPTEMBER 1946 NUMBER 1

In the drug wholesaler's case goods department are stored the original shipping cases of a hundred different sizes. Some products are fast selling, some sell only as single units, perhaps on doctor's prescription. This department supplies all of the merchandise for both the full- and the broken-case orders.

What size shippers? . . . a distribution problem

The question is frequently asked—in fact, books have been written on the subject—"Does distribution cost too much?" The answer casually given is a glib affirmative, but the question cannot be dismissed in any offhand manner. There are too many factors involved. Some of them are obvious, some not in plain view.

One of the elements that has a definite bearing on the cost of distribution is not in plain sight of the average person. This is the size of the shipping case. A question every manufacturer might ask himself is: "Do my present shipping cases represent the most efficient, convenient and economical units possible for me to adopt?" The answers, to be of any value, should be obtained by a study of what happens to the goods after they leave the maker's shipping room.

A recent study made by a special committee from the membership of the National Wholesale Druggists' Assn. provides some suggestions which will doubtless be of interest to manufacturers who sell through wholesale and retail drug channels. Declaring bluntly that distribution costs are increasing, the committee, headed by W. Rutherford James of Towns & James, Inc., Brooklyn, sought information from wholesale drug houses on which recommendations for case sizes of various products might be based. In general, according to reports obtained by the committee, cases are too large and contain too many units. For the most part, half-gross cases should be replaced by 3-doz. and 1-doz. containers. Three-dozen cartons should be reduced to one dozen and sometimes to a half-dozen. Specific prescriptions, however, can only be given in the light of

The wholesale house has as many as 30 "picking stations" each with its group of products, where quick-fingered clerks select one or a dozen consumer units—with sometimes an extra for "free goods"—to fill broken case orders. Conveyor line takes baskets on to next station.

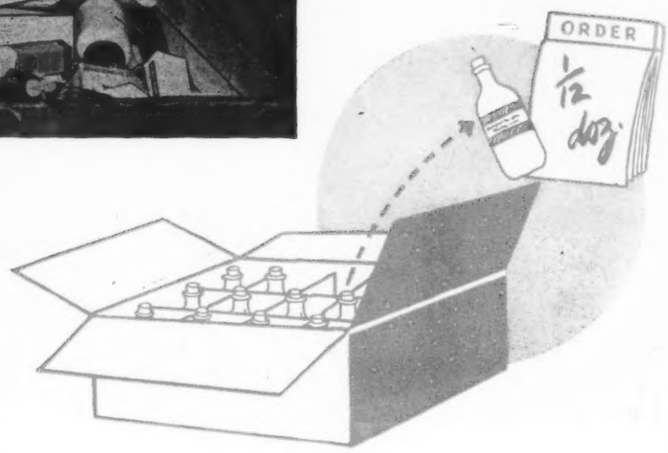
the particular product ordered and its rate of turnover.

Two real culprits responsible for considerable loss and damage are the oversize shipping case and lack of an inner shelf carton.

To understand how these losses occur, one must have a close-up of the conduct of the wholesale drug operation. There are some 300 general line drug wholesalers in the United States. The average radius of operation for overnight delivery is about 200 miles. The stock carried represents between 30,000 and 40,000 items, and the operating overhead is in the neighborhood of 12%.

These 300 wholesalers service some 54,000 retail drug stores, who in turn cater to their local neighborhoods, carrying an average of 10,000 to 12,000 items with a margin that ranges from 26% for the fast-moving articles to 50% or more for those with slow turnover. Added to the retail drug stores are some 8,000 hospitals served by wholesalers, whose needs often call for broken case shipments.

The wholesaler is little concerned with the eye value of a package. His function is to handle the goods in the most efficient, safest and quickest manner possible. If he performs this function properly, he earns every fraction of his gross margin. That margin must frequently carry losses, damage and spoilage charges, some of which are caused by the fact that the units of sale desired by his customer, the retailer, have little or no relation to the number of units contained in shipping containers. The situation places an extra burden on the wholesaler. He must break cases, pick the desired number of units, re-pack and deliver to the retailer. Many wholesalers admit that to some extent they have "spoiled" retailer customers by tolerating their ordering in quantities of "$^1/_{12}$ of a dozen"—a standing drug joke to the outsider, but a grim reality



to many a wholesaler. As will be shown later, there are some things which the wholesaler can do to help eliminate this bad practice, but up to the present the force of competition has caused it to be retained. If one wholesaler refused to ship what the retailer insisted was a reasonable minimum, the retailer knew another one who would accept the order.

The wholesaler's warehouse is a very busy, crowded place. In the metropolitan centers, the wholesale house maintains regular daily, weekly or bi-weekly telephone contacts with its retailers, making use of a highly trained corps of telephone order clerks, whose operations, incidentally, reveal the first high cost element connected with broken case orders. It requires as much bookeeping and clerical work to handle an order for $^1/_{12}$ of a dozen as it does for a gross—but the comparative percentage of bookkeeping expense for two such transactions presents quite a contrast.

The daily or weekly wants of the retailers, naturally, represent an amazingly wide variety of products, and of course the quantities likewise vary widely. Speed and accuracy in supplying those wants are of vital importance to the retailer and the consumer; and the wholesaler organizes his operations with that in mind. Each incoming order, whether received by telephone or through an outside salesman's activity, is marked with

cryptic check marks and symbols to indicate the warehouse location or section where each item is to be "picked up."

In the warehouse, every available square foot is utilized for storage. Most drug wholesalers keep their "case goods" storage separate from their "shelf stock"—the same identical consumer units, but the items must be stored to facilitate the handling of outgoing orders, which vary quantitatively, depending on the retailer's needs. (The N.W.D.A. study revealed that only 6% of the wholesalers store case and shelf goods together.) The case goods storage is drawn on to fill orders for complete cases and to replenish the supplies in the shelf goods storage, used for broken case orders.

In the up-to-date wholesale house, the observer will see a maze of conveyor lines, running from topmost floors—where in all probability the case goods are kept—to the loading platforms. In the shelf goods department, these conveyor lines are dotted with "picking stations," at which deft-fingered clerks, in obedience to the symbols on the order, select the required number of a given group of items, placing them with the order blank in a sort of "tote basket," which is then pushed by conveyor on to the next picking station, finally reaching the packing tables, where the entire order is prepared for shipment. Time required for the routine travel of an order from the telephone order clerk to the loading bins is a little over an hour.

But as a part of the price paid for speed and accuracy, there is a certain amount of spoilage, breakage and soilage of packages. Some of this at least, declares the N.W.D.A. Committee, would be avoided if more manufacturers could be induced to adopt shipping case sizes based on the quantities which the retailer orders—or the quantities which he could be persuaded to order if different shipping case sizes were available.

Directly bearing on the question is the relative dollar volume of sales which the wholesaler makes in original shipping containers as compared with broken case sales. The N.W.D.A. Committee learned that 16½% of the members who responded had made such an analysis but with nothing like uniformity of results. Their estimates ranged from a low of 2% to a high of 35%. If a weighted average could be arrived at with so small a number, it would doubtless be in the neighborhood of 19%, and informed wholesalers say that is not far out of the way. That means that 80%, by dollar volume, of the drug wholesaler's business involves breaking up the quantities which the manufacturer ships in his original cases, in order to supply the retailer with the quantities which he wants.

On the face of it, this indicates an apparent disregard, on the part of the manufacturer, for the problems of his distributors. The wholesaler with some justice can charge that in many cases. It is not the manufacturer's sales department which determines how many units are to be packed in a case, but that is decided by the production manager or someone unfamiliar with what happens to the goods after they leave the factory.

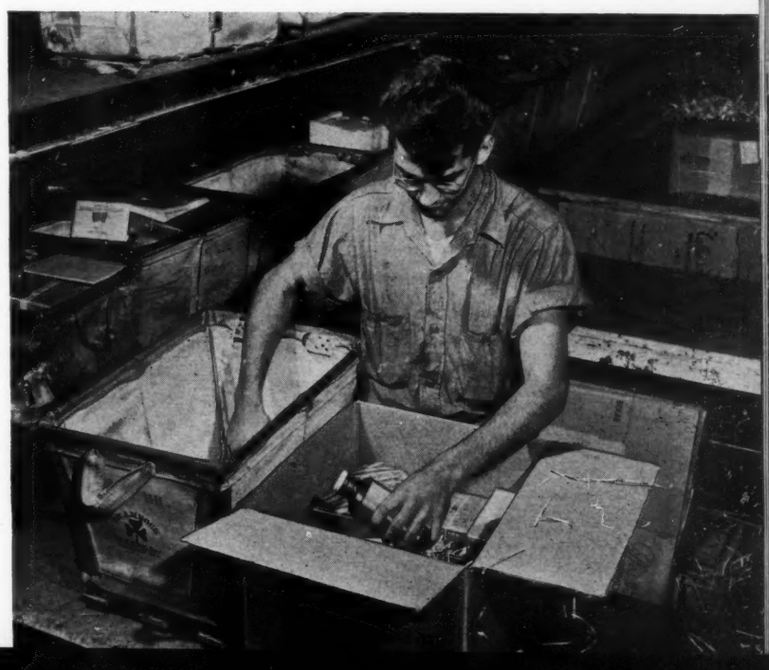
(*Page 95*)

In extenuation, it can be said that war shortages made both goods and shipping containers difficult to obtain. The wholesaler hopes that with the return of normal business, competition will provide the stimulus that will impel manufacturers to study the buying practices of their outlets, with a view to adapting their case sizes to those practices.

With full sympathy for the manufacturer's wartime plight, the wholesalers have nevertheless brought some influence to bear by instructing their buyers to make recommendations to manufacturers as to the number of units which should be packed in original shipping cases so as to increase case sales, thereby reducing handling costs. Nearly half of the wholesalers, the N.W.D.A. Committee found, have made such efforts, and others plan to do so when the paper situation improves. However, in some instances it may mean that when case lot sales are increased, discounts to retailers will have to be increased too. Whether these increased discounts will be offset by increased convenience and decrease of losses and spoilage is something that remains to be learned. In the opinion of most wholesalers, the net effect will be a decided gain.

The wholesalers were very specific in answer to their committee's question "What commodities do you consider the most troublesome and expensive to handle in broken case quantities and why?" Due allowance is made for the effect of wartime shortages, accurately summed up thus by one remark: "Much of our present trouble is due to wartime packaging—lightweight cartons, no carton liners, metal shortage requiring paper substitutes, more units per case due to paper shortage." Nevertheless, the war can't be made the goat for the entire problem. The following list presents commodities which wholesalers regard as troublesome and expensive to handle in less than case quantities. They are given in the order of number of mentions:

When an order is fully assembled it goes to the packing tables, where expert shippers safeguard it against breakage and "ready" it for truck delivery to the retailer.



Sanitary napkins and tissues.
Glass packed products, especially in large size units.
Insecticides, disinfectants, acids, inks, glues.
Fruits and syrups (fountain supplies).
Soda glasses and prescription bottles.
Stationery.
Soaps.
Lighter fluids, cleansing compounds, 5-lb. Epsom Salts.
Powdered products, especially those in flimsy unit containers.
Small items, such as lipsticks.
Light bulbs.
Crutches.

Perhaps the last item was included with a touch of whimsy, for one cannot picture the average retailer ordering a carton of crutches; but certainly the rest of the listings were made in dead earnest and they represent an opportunity for more convenient packing units and for better wholesale selling. Sometimes single units are necessary or even desirable, as in the instance of expensive drugs, biologicals or pharmaceuticals, used rarely, in small quantities and only on prescription. Such products should be individually packaged with an eye to perfect protection, whether in a gallon jar or a vial containing a dram. Instructive also are the mentions of the various types of inconvenience and losses that are caused:

One of the casualties growing out of broken case shipments is the display—artistically prepared, sound in its merchandising idea, lithographed in full color—only to find its way to the scrap pile in the warehouse.

Breakage, meaning total loss of the item plus damage to other merchandise.
Leakage.
Soilage of packages.
Re-packaging of broken case lots difficult and time-consuming.
Evaporation.
Fire hazard (in case of products like lighter fluid).
Freezing.

Those inconveniences and losses are burdens borne mainly by the wholesaler. Most manufacturers help to share breakage losses by replacing broken units—but this commendable practice only compensates for the loss of the goods without obviating the inconvenience and contingent losses. Eventually the consumer pays all such economic losses.

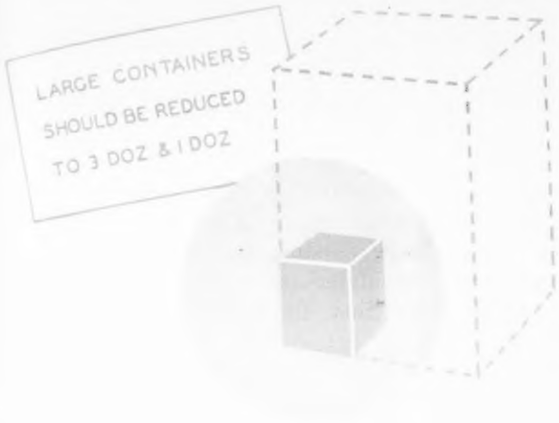
The manufacturer, too, suffers losses that must run into considerable volume. And he may never hear of nor realize them, because they are hidden losses, difficult to measure. One of these is the loss of advertising material often enclosed with case goods. This comes in the form of lithographed counter or window display and dispensing pieces, that represent careful thought and creative preparation, to say nothing of the cost. When a case is broken to fill a small order, at least one retail dealer goes without the "sales helps" which the advertising or sales department of the manufacturer has so carefully developed. Perhaps the dealer who gets the rest of the case lot may get the display—more often he doesn't; because the busy clerks in the wholesaler's warehouse are concerned mainly with filling the order for the merchandise called for. Neither he nor the retailer will be on the lookout for the display, which to the worker in the wholesale house is merely something that clutters up his crowded little "picking station."

While there is no way of obtaining an accurate figure on such losses, the estimates made by various wholesalers are illuminating. The N.W.D.A. Committee asked "Approximately what percentage of display material now enclosed in original cases by the manufacturer is wasted by reason of your breaking cases to fill less-than-case orders?" With only one exception, all the wholesalers had positive ideas on the subject, even if they ventured no actual estimate. Tabulation of the responses that gave percentage figures shows that:

9% estimate display waste of 0 to 20%
9% estimate display waste of 20% to 40%
28% estimate display waste of 40% to 60%
19% estimate display waste of 60% to 80%
15% estimate display waste of 80% to 100%

The manufacturer sustains another more serious hidden loss, still more difficult to measure—represented by sales that "might have been." If the retailer carries too small an inventory, many times the ultimate consumer who comes in to buy the product and is told "We're fresh out," either switches to a competing product or walks out without purchasing. For the par-

(*Page 96*)



Here is one of the horrible examples of "nuisance packing." No retailer orders more than a gallon of this product, but wholesaler must break open 4-gal. container, handle it with the possibility of jeopardizing every other item in "tote basket," repack it to reach retailer undamaged.

ticular manufacturer, this means more than the loss of the sale; it means a waste of advertising and a certain loss of good will. The campaign, carefully planned and carried out, which induced the ultimate consumer to specify his product by brand name, has borne its fruit, but "No Sale" shows on the cash register simply because the manufacturer's packaging practices discourage the retailer from carrying a reasonable stock to meet the demands.

It is within the province of the wholesaler himself to to adopt certain practices which at least alleviate the evils resulting from ill-adapted case packing. He can instruct his salesmen and order clerks to confine the sales of certain products to shipping case quantities. The N.W.D.A. study disclosed that over half of the wholesalers endeavor to follow that practice, and the list of products which they handle in that manner coincides closely with the list of trouble makers given above. Some of those who have made little effort in that direction have no hesitation in admitting that it is the force of competition which deters them. Others, without making hard and fast rules, instruct their salesmen to "influence" retailers to order case lots.

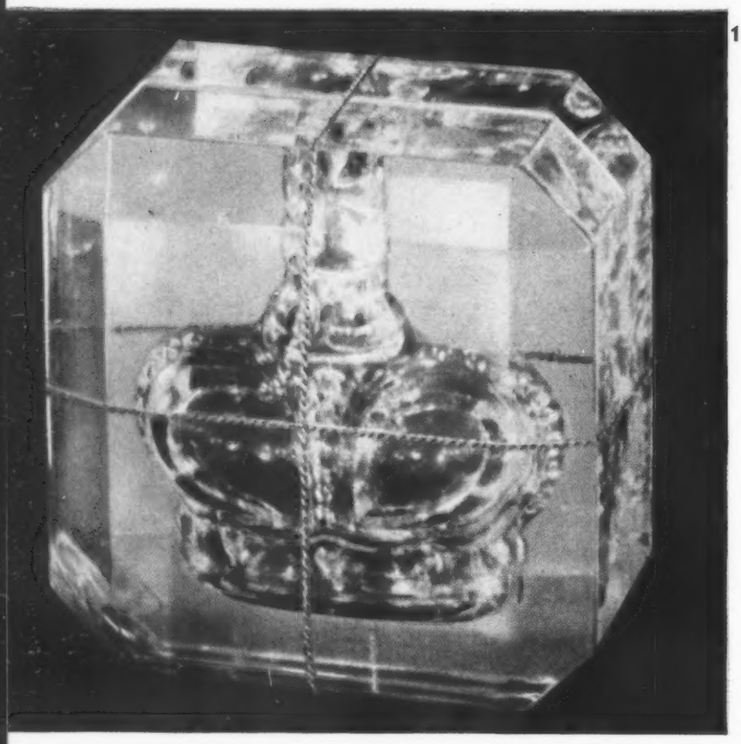
If their salesmen are supplied with comprehensive lists showing contents of shelf packages and shipping cases, wholesalers have found, it is of material assistance in influencing case sales. Some 61% of the membership polled follow this practice, and an additional 8% declare their intention to provide their men with such lists. There can be no doubt, the wholesaler feels, that a salesman can use such a list to help his retailer customer gear his purchases of certain items to his probable activities a month or two in advance, depending on the turnover he can reasonably anticipate. It is rather too much to expect a field man, who represents a warehouse with 30,000 products in it, to retain a knowledge of packings without a list. The least the wholesaler can do is to supply that assistance.

Many wholesalers conduct periodical drives for case sales, during which time they may grant slightly better discounts. As a matter of general practice, however, very few wholesalers grant extra commission to their field men for case sales except in instances where the manufacturer has such a policy—specific mention was made several times of one manufacturer who does. In the majority of wholesale houses, reliance is placed on the extra dollar volume for the salesman's compensation for case sales.

Apparently the wholesaler has a little ground for complaint against the manufacturer's "detail man" in respect to case sales to retailers. At any rate, 39% of the responses indicated that no real effort was made by the manufacturers' representatives to sell retailers in original cases, and one comment indicated that "transfer orders" taken from retailers by manufacturers' representatives are "so pathetically small that it seems like a criminal waste of time to write them."

Due to the activities of this committee, the N.W.D.A. is in a position to be of practical assistance to any manufacturer who wishes to revise his packing so that it will conform more closely to retailer requirements. The $64 question submitted to the wholesalers asked for specific mention of lines considered to be packed now in shipping cases of uneconomical size, and requested recommendations as to number of units which should be packed in original cases. A wealth of suggestions resulted, and the committee plans to make the information available to interested manufacturers. The wholesalers reported by giving the name of the manufacturer, the product name and sizes, present number of units per case, (*Continued on page 170*)

Cosmetics ...a Christmas season of splendor



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Previews of fall cosmetic packages indicate one of the most lavish Christmas seasons in the history of the toiletries and perfumery industries. There may be shortages of decorative materials, but the packages now moving off production lines for the holiday counters certainly don't show it.

Plastic materials are making the headlines for decorative perfume containers and are being worked in many new imaginative forms. Lentheric, for instance, puts its three bottles of miniature perfumes in a molded container made of polystyrene foam that looks like a snowball. The material appears to be of crystalline structure pressed into shape and sparkles like real snow. The two halves fit together like a box, with indentations in each to accommodate the three bottles (Fig. 6).

Out in Chicago, Kay Daumit has created a new setting for "Forever Amber" perfume, which is even more realistic than the acrylic book container adapted earlier this year (MODERN PACKAGING, March 1946, p. 155). The new container (Fig. 5) is also designed to look like the book but is made of a plastic composition material. Rubber molds are used and the material is poured in liquid form. The surface of the "book" is first silver plated, then given a final gold coat by application method. The blue-green color on the letters of the book is applied by means of a roller while book edges are tinted pink and wiped off. The stock perfume bottles are an integral part of the container. They are suspended in the multiple cavity molds when the space between bottle and the wall of the mold is filled with the plastic.

The closure for the container is also specially designed so that when finished it appears to be a gold bookmark protruding from the book. The functional part of the

***1 & 2**—Prince Matchabelli's acrylic container has been adapted for a new perfume, "Crown Jewel," faceted like a square-cut diamond and housed in a satin-lined suede box.* ***3**—Back again is Matchabelli's Christmas bell, made of brass with real clapper.* ***4**—Helena Rubinstein adopts a transparent Christmas bell package made of polystyrene.*

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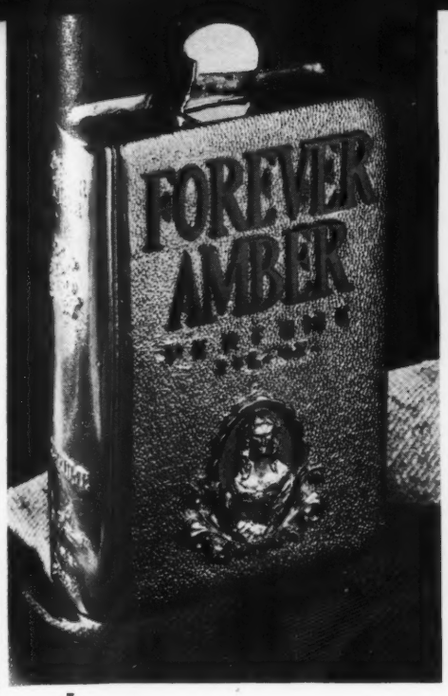

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5—Catherine Winsor's book is reproduced in gold-plated plastic as the container for "Forever Amber" perfume. Bottle inside has closure that looks like bookmark. **6**—*Lentheric snowball is made of polystyrene foam.* **7**—*Two disks of acetate cemented together hold bottle of Rubinstein "Apple Blossom."*

closure is a screw-type plastic cap made with a well into which a stainless steel applicator rod is inserted. The plastic cap is then covered with a stamped metal cap cemented to the plastic closure. The finial which forms the part that looks like the bookmark is brazed to the top of the outer metal cap.

Among the big hits last spring was Matchabelli's package holding the famous gold encrusted crown bottle suspended in a cube of transparent acrylic (MODERN PACKAGING, March 1946, p. 154). This fall Matchabelli introduces a new perfume called "Crown Jewel" and facets the molded cube-shaped package in the form of a square-cut diamond (Figs. 1 and 2). The carving of flowers is eliminated on the new package and the classic design increases the three-dimensional effect of the container. The only difficulty encountered in adapting the container to the new design was in making the eight points of tangency of the facets coincide when the two halves of the container were matched together. The Crown Jewel container is placed in a satin lined set-up box, which is covered with a taupe-beige sueded paper and identified by a gold crown.

Back again, too, is the Matchabelli Christmas bell package, made of brass with a real clapper inside, so popular before the war (Fig. 3). Something new in box design is Matchabelli's "Crown Duet," package—a pink and blue ribbon-tied box which opens on a hinge diagonally, each half containing a bottle of perfume (Fig. 8).

Helena Rubinstein's Christmas collection reveals many outstanding adaptations of transparent plastics. She, too, uses a bell-shaped container to hold three bottles of perfume, but the bell is made of polystyrene, comprised of a tray base and bell-shaped cover with clapper (Fig. 4). A new acrylic package is a fabricated container for perfume, whose top and bottom are

(*Page 99*)

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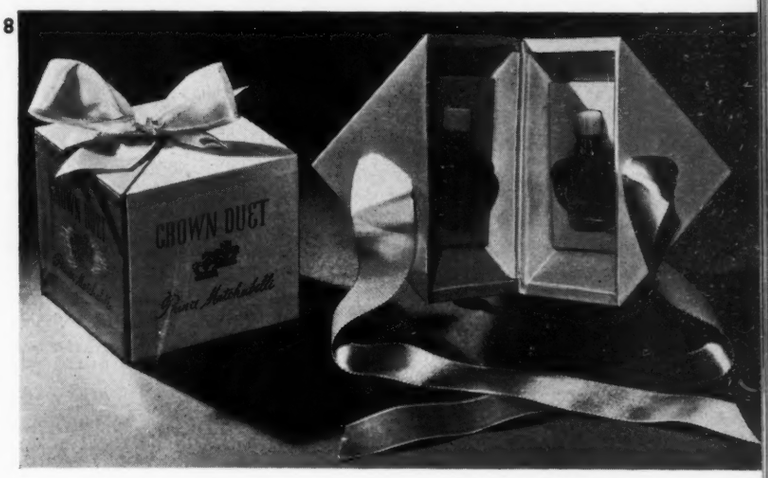

8—Something new in box design—a hinged box for Prince Matchabelli's "Crown Duet" that opens diagonally. **9**—*Sheets of acrylic cut in several geometric forms to make these sparkling containers for Prinal perfumes.*

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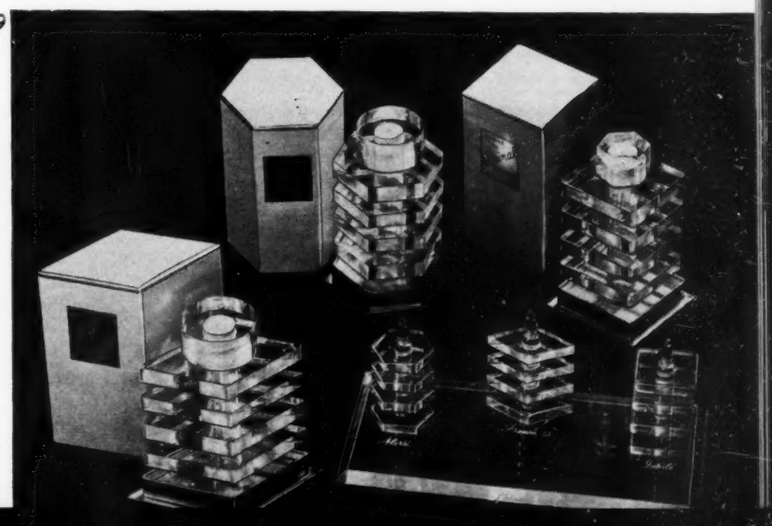

10—*Trend toward elaborate in design is exemplified by deep-embossed red, green and gold cover paper for Coty Emeraude set. Coty puts perfume on skis (top right) and in swings (bottom right). Compacts are in painted wood box.*

star-shaped and with sides conforming to the star-shaped ends. A cylindrical acetate box with cone-shaped lid is designed like a bird cage and holds a variety of several bottles of perfume. A package that you can hang on the Christmas tree, called "Holly Wreath," is formed of two discs of transparent acetate cemented together with a bottle of "Apple Blossom" perfume between (Fig. 7). A colorful holly wreath is printed on the acetate and a red ribbon tie completes the package, which is a throw-away after you tear it open.

11—*Milo perfume bottles are hidden in these very decorative containers of carved mahogany and American walnut.*

Acrylic sheet in geometric forms is used effectively for a group of fabricated containers made for Prinal perfumes that come from Los Angeles (Fig. 9). There are three shapes—diamond, square and hexagonal and each is made in two sizes. Set-up boxes of simple design are made in shapes corresponding to those of the containers. These containers have a very brilliant appearance and edges of the several platforms catch the light like cut crystal.

Many boxed gift sets, scarce during the war because of the paper situation, will be seen this year although they will be limited in quantities.

Coty, which caused a sensation with the cover paper for its perfume called "Muse," (MODERN PACKAGING, April 1946, p. 127) now introduces many new papers for their Christmas gift sets. Most unusual of these, perhaps, is the red, green and gold box cover for an "Emeraude" set (Fig. 10). The design is an adaptation of an antique gold brocade suggested by a Persian

(*Page 100*)

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12—Gloria Vanderbilt gets a French bottle, jewel cut for "Diamant Bleu," set in velvet lined box. **13**—*Toiletries are in light blue containers with dark blue caps.* **14**—*Men's cologne is packaged like a bottle of champagne.*

Princess' robe. The embossing is so deep that the paper looks to be textured.

Coty is also back with a large collection of Christmas gift novelties. Those who remember the wooden sleds of a few years ago carrying small bottles of perfumes, will be interested in a new design—a pair of miniature wooden skis, each one carrying a bottle of perfume, placed on a platform of sparkling simulated snow.

Coty compact and perfume combinations are placed in very simply designed wood boxes that are painted white and tied with colorful ribbons. Another Coty idea is a package for perfume which simulates three miniature rope swings, each one carrying a bottle of perfume. The swings hang from a be-ribboned rod held up by supporting posts of transparent plastic set in the base of a set-up box.

A notable newcomer in the fall cosmetic parade is Mrs. Gloria Morgan Vanderbilt, who has gone to work in her very plush salon selling a line called "Diamant Bleu," including cold creams, foundations, lotions, rouge and perfume at 30 dollars an ounce. She claims her perfume is in one of the first French bottles to reach the American market since the war (Fig. 12). It is squat shaped, cut like a jewel set in royal blue velvet. The box of special construction has a gold base and a lid embossed in blue and gold and embellished with her

14

name and her crest—one she designed for herself. On it are a horseshoe, two hearts pierced with an arrow, a dancer and a tiny figure of a man rowing a boat. The symbolism is "pour le chance," "pour le dance," "pour l'amour" and "pourquoi pas?" The toiletries carry the same crest in royal blue on a light shade of blue, with blue closures (Fig. 13). There is also a cologne and after-shave lotion for men packed in wicker baskets like splits of champagne (Fig. 14).

It's the dream of every returning G.I. to have his own business and quite a few have entered the cosmetic field. Seymour Rodman of Milo, New York, got the idea for his perfume containers in Hawaii where he saw a number of interesting wood carvings. Back home in New York, he employed a designer to make a set of de-

15—*Herb Farms "Carousel" is an acetate box with cone-shaped lid. Another package simulates store front of Herb Farms London Shop.* **16**—*Herb Farms men's line gift set (left); culinary assortment in basket (right).*

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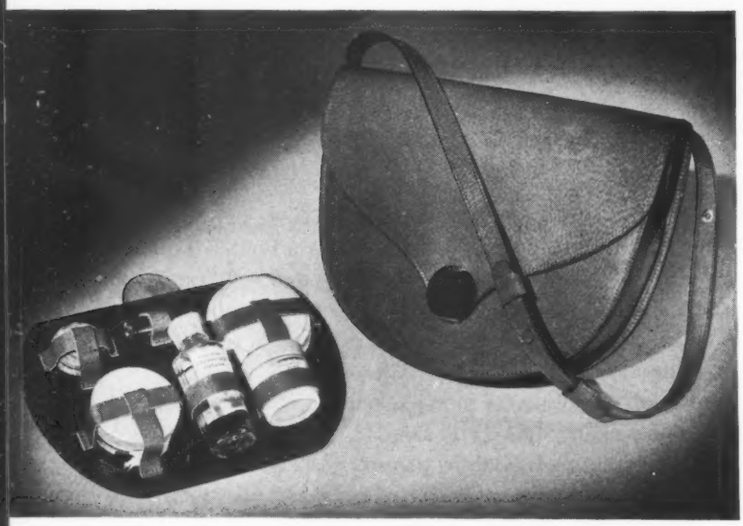
17—Dorothy Gray's "In the Pink" line is good example of distinctive design using all stock containers. **18**—*Glass container for Yardley Bond Street sachet with plastic screw cap is made to look like a pouch bag.* **19**—*Marie Earle's new fitted case is a very usable shoulder bag.* **20**—*Two newly designed lines—Primrose House, "Chiffon" and "Forget-Me-Not."* **21**—*"Miss Twinkle" is a newcomer, whimsically designed, for the two-to-twelve agers.*



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signs which could be carved of wood and serve as containers for perfume bottles. A carver was employed to do the job and now the set of seven different containers are on the market all made of Peruvian mahogany and American walnut—in shapes such as fishes, cornucopias, twirling leaves, etc. (Fig. 11).

Dorothy Gray's "In the Pink" line is one that will receive big promotion this fall and indicates how well individuality may be achieved with all stock containers (Fig. 17). The line includes soap, bath powder, talc, cologne, toilet water, bath oil, sachets, etc., all in a family of packages designed in keeping with the name "In the Pink" theme—a rose tied with a pink ribbon. Unusual placement of labels on one side of the bottles gives an unusual effect.

Two notable acetate containers are in the Herb Farm collection (Fig. 15). One of these called "Carousel" is cylindrical in shape with cone-shaped cover, painted with circus animals and scalloped canopy that give the effect of a miniature merry-go-round. The base is die-cut paper printed in all-over gold. The other package is a replica of the Herb Farm shop in London. Outline of window frames and lace drapes are silk screened on the acetate. Three bottles of perfume are held in place on a die-cut, foil-covered platform. Embossed pink paper in quilted pattern lines the box.

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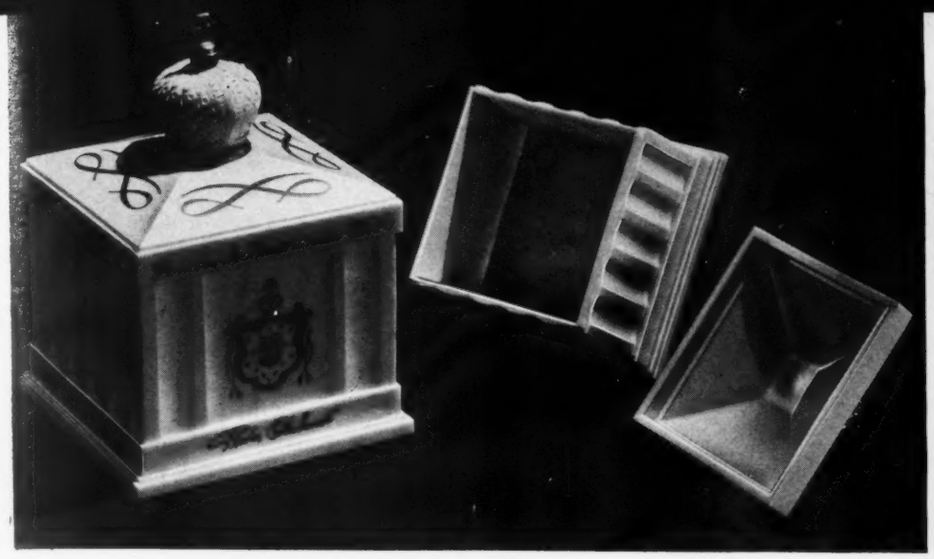

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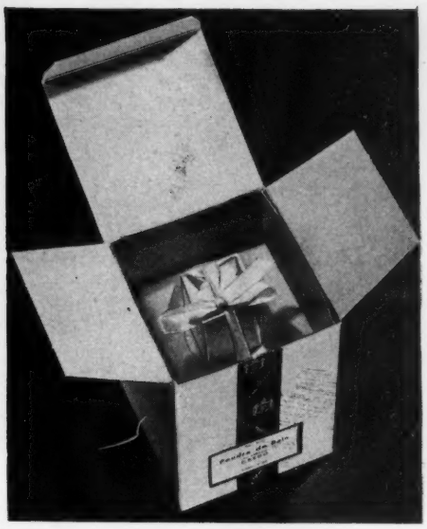

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22—Prince Obelinsky powder containers are injection molded of polystyrene. Crown knob is cellulose acetate. **23**—*Same container is protected in carton with die-cut piece of board and cardboard sleeve tied over crown knob.* **24**—*Blue Fox cologne has closure of transparent blue cast phenolic. Blue foxes decorate carton wrap.* **25**—*Gold plated bottles in small sizes make excellent re-use containers for the purse as this one for "Tsan-Tse" perfume.* **26**—*"Djer-Kiss" packages have been completely redesigned. Theme is modern treatment of couple in Empire costumes.*

Herb Farm Shop has a new men's line called "Pomander," including toilet water, after-shave lotion and talc, packaged as an ensemble in a blue and gold box. Labels are richly embossed gold-colored foil (Fig. 16). Baskets are extensively used by Herb Farm for their culinery items and the company is using six different sizes—large ones with handles as well as small trays. Illustrated is one of the small ones which is designed as a popular item to make shoppers herb conscious.

Fitted travelling cases and kits have long been popular gift packages for cosmetic houses. Many of these are now back and for a price one will find on the market a number made of real leather. Most unusual is Marie Earle's Bandoleer Kit of pigskin—a complete shoulder-strap bag with fitted cosmetics, which may be removed when the user wishes to carry it as a purse (Fig. 19).

Many companies are redesigning staple lines. Notable among these is Primrose House, which introduced its Chiffon face powder in a gold and yellow box last spring (MODERN PACKAGING, May 1946, p. 89) and has now carried the same design throughout an entire line (Fig. 20). Their Forget-Me-Not line is also redone in a more feminine manner to make the products more attractive as gift items and to provide counter appeal.

A novel use of opalescent glass is the jar for Yardley's Bond Street sachet, which is made to look like a pouch, tied with a string. The creamy-looking glass is topped with a specially molded screw cap which further carries out the idea of the shirring of a pouch bag. A daub of sealing wax holds the golden cord in place (Fig. 18).

LaMar Laboratories "Tsan-Tse" perfume has been put in a container that will (*Continued on page 182*)

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CANDY

. . . looks ahead to better packaging

1

Nobody, perhaps, has had a tougher time of it than candy manufacturers—with sugar shortages and make-shift packaging materials. But somehow, as you would expect of men who satisfy the nation's sweet tooth, they are among the most enthusiastic in making their future packaging plans.

Suppliers of packaging materials and equipment who exhibited at the National Confectioners' show in Chicago returned saying they had never seen more optimism or forward-thinking expressed even though it may be a year or more before the candy industry can get all the cellophane, foils, glassine or other materials it can use.

Candy and confections are profitable items and makers expect extremely keen competition. They realize it's going to take something better than the prewar package to meet the competition for display space, to meet the requirements of modern counter and self-service selling methods, to give the package protection necessary to maintain freshness and flavor.

Trade and dealer organizations in the confectionery industry have promotional plans well underway through such campaigns as that of the Candy Council promoting candy as a food. The next step is a well-designed package with plenty of eye appeal and protection to live up to these aims. Many well-known firms predict that the days of bulk candy sales which still amount to about 20% of volume are over and that candies, confections, nuts and chocolate will have to be almost 100% packaged to receive acceptance through modern merchandising outlets.

Makers of bar candies, which account for more than 50% of the candy sold, and those who put out small

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1—Marshmallows, checkerboard fashion, are good eye catcher. "Three B'ars"—Papa, Mama, Baby—suggest an impulse idea for a multiple-bar unit sale. **2**—*This Corn Crib, die-cut, with cellophane window also provides juvenile appeal.* **3**—*"Tape-O-Nuts" consists of "tape" of 12 individual packets of peanuts, accordian folded and banded—a family package planned for pick up in food store.*

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packages for counter sale in 5 to 10 cent units are avidly looking for new designs or already have new designs on the market. They are also anxious for new equipment which will make neater packages, permit a better seal or other improved features. One machinery manufacturer stated that he was receiving more and more requests for machines to handle Pliofilm as well as heat-sealing foil and other new types of packages. It is his opinion that the trade is definitely taking more interest in the quality of the packages and putting less emphasis than heretofore on speed.

Some of the make-shift papers used during the war were brittle and often broken before arrival on the counter. Wrappers did not stay sealed and thus came unfolded and were unappetizing-looking on the counter. These troubles, of course, were due in a large part to supply conditions, but candy counter owners did not like them. They say you can't stop people from handling candy bars on an open display and packages that get messy are not very salable. Neatness of candy packages, they say, has a great deal to do with sales.

This is another reason why makers of small candy packages for counter sale are interested in obtaining packages as good or better than they had before the war. Many newcomers appeared on candy counters during the war. To hold their business these companies must package their products as well as the old favorites which are again reappearing on the counters. Makers of old favorites, on the other hand, are returning to their prewar foils, cellophanes and other materials or are looking for improved materials such as laminated and lacquer coated glassines.

Candy makers are also giving more and more attention to the food store as an outlet for candy. According to figures obtained by the market research division of Du Pont Cellophane division, shoppers go to food stores $3^1/_2$ to 7 times more often than to any other type of store and 71% of the candy, nuts and candied fruit bought in these stores is purchased on impulse or "entirely on the spur of the moment because it looked good or otherwise caught the shopper's roving eye."

Candy sold in food stores, therefore, must be first

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PHOTOS 1,2,3,4—DUPONT CELLOPHANE PACKAGE ENGINEERING AND DEVELOPMENT DEPARTMENT.

4—Four suggested ideas for eye appeal and visibility packaging to increase candy impulse sales in food marts.

attractively packaged and placed at locations in the store where it will meet the shoppers' attention.

Another trend of importance, it is believed, is the desire on the part of the food-store shopper for a "family" sized candy package or unit of sale. She is more apt to buy a fairly good sized package of mints, salted nuts or four to five bars of candy packaged together at what looks to her like a good buy at 29 cents than she is to buy in the smaller quantities sold on the cigar store counter, in the corner drug store or at stands in bus and railroad stations.

This, of course, means a larger unit of sale for the food store and the candy manufacturer. The latter is thus interested in planning packages suitable for this type of market and convenient for handling in the food store where there is little time for bulk handling, and a shortage of facilities for making packages sufficiently attractive to capture the impulse purchase. Such merchandising of candy demands an eye appealing, convenient package at a popular selling price. That's why plans are for units geared to price appeal rather than to the

5 PHOTO, SYLVANIA INDUSTRIAL CORP.

5—Toys and other novelty gift items, filled with confections, offer a profitable way to sell candy. Toy wagon contains cellophane wrapped boxes of sour balls; look like blocks.

(*Page 105*)

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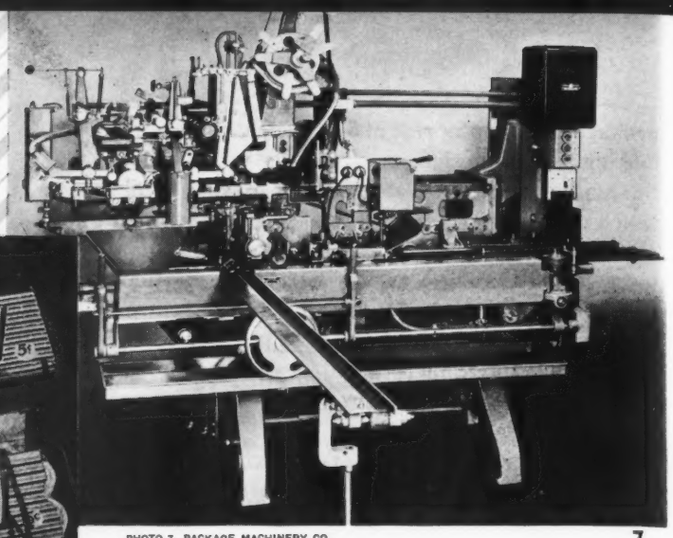
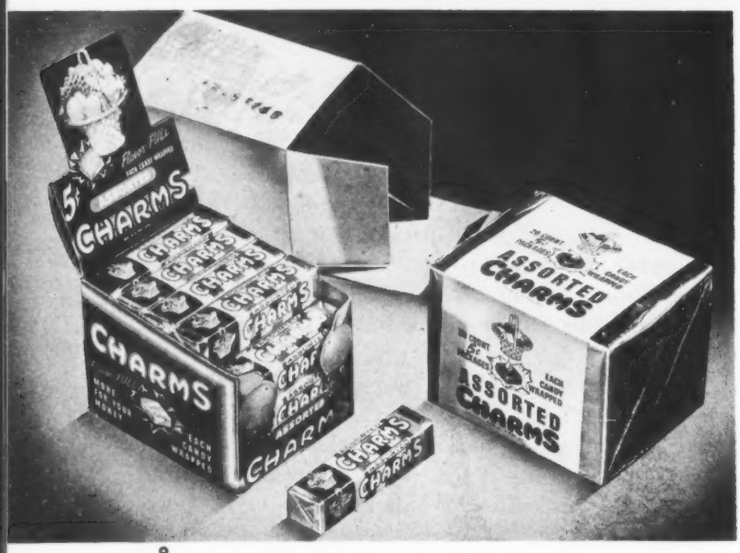


PHOTO 7, PACKAGE MACHINERY CO.

7

6 & 7—*Trolls package has laminated foil and paper tight wrap, printed in colors and with tear tape. Feature is good heat seal on very narrow package. Wrap is applied automatically by machine that prints paraffine strip, then heat seals the wrapper.*



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8—*Charms Company is a leading user of foil. Fruit drops have laminated foil wrappers; shipper also has foil wrap.*

old principle of weight in pounds or fractions of pounds.

Visibility packaging, too, will play a very important role in this planning for impulse sales.

Makers of cellophane suggest a number of designs for such packaging which, they say, are geared to the six basic merchandising trends: self-service, convenience, informative labeling, impulse buying, protection and visibility.

One of these is called "Tape-O-Nuts" and consists of a "tape" of 12 individual cellophane packets of peanuts, packaged on a machine such as the Transwrap with knife blade removed from the crimper jaws so that the packets remain together, accordian folded and held together with a band. It is suggested that the package also has possibilities for other free-flowing confectionery items. The main idea is to increase by six times the average snack sale of peanuts when the housewife picks up the package and buys it in the food store. At home, various members of the family tear off the individual packets. Pop takes one for his lunch, Sister takes one to the office; Junior grabs off one to take to schoo', and several are left for Mom to have for afternoon bridge or for a cocktail snack.

"Happy Family," a suggestion for bagged candy, is a large double-wall, heat-sealing cellophane bag to hold $2^1/_2$ lbs. of mixed candies. As a home consumption unit it will last a long time. It may be loaded on a weighing and filling machine and the closure can be heat sealed on automatic equipment.

A multiple candy-bar unit called "Quartet" suggests a unit of four different chocolate bars packed on a cardboard stiffener with a fold-over header in a flat cellophane bag. The multiple sale of four bars offers a variety of types of chocolate to satisfy the varying tastes of the family.

Two types of jelly candies are put in individual $^1/_2$-lb. bags and placed inside a die-cut window carton and called "Jelly Jar." The suggestion is one for variety and also provides a package from which one bag can be used up without opening the other one.

An appetizing variety of candies wrapped in a "hostess tray" package is suggested for its adaptability to mass display and requirements of self-service selling.

"Three B'ars" is a novelty candy package idea with lots of juvenile appeal. Pictorial illustration is that of Papa B'ar, Mama B'ar and Baby B'ar, each on one of the three bars placed on a cardboard backer that folds around the face of the unit, which is machine wrapped in cellophane. The realistic idea of the story is carried out further by three sizes of bars in the package—the big one, bitter for Papa, bittersweet for Mama, sweet for Baby.

Another item suggested as an impulse item to take home to the kids is called "Corn Crib" and designed for packaging the perennially popular confections that look

like kernels of corn. A cellophane bag placed in a die-cut box with carrying handle gives novelty and eye appeal.

Two types of marshmallows that could be arranged checkerboard fashion in a tray and machine wrapped with cellophane is a definite eye stopper and an interesting example of visibility packaging.

Nor is novelty in candy packaging being overlooked in promoting new sales outlets. Many of the confectioners have already been using, as part of the package unit, a toy, a make-up box, pottery jars and other items that can be re-used for other purposes after the candy is consumed. These are definitely impulse items—gift suggestions particularly when the shoppers wants to take something to a child or as a hostess gift. Such packaging, it is believed, is an important merchandising idea. For example, a wooden toy wagon, carrying not actual blocks but square open-end boxes filled with sour-balls, cellophane wrapped, with one letter of the alphabet printed on each, suggests a profitable gift item that includes a candy sale.

For years aluminum foil has been used for chocolate-bar wraps and for other special candies, and many pre-war users of foil are going back into foil just as fast as they can get it. For many applications in the confectionery field, foil has decided advantages—eye appeal, impermeability to light rays, impermeability to transmission of odors and flavors in either direction. In its natural state it has a brilliant silver surface yet may be printed in eight colors and embossed in an endless variety of patterns. The highly polished surface also, the makers claim, is resistant to soilage from grease, dust, scuffing, etc.

In candy packaging those advantages offer many possibilities. The phenomenal growth of aluminum production—40,000,000 lbs. to more than a billion and a

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9—Gloss inks are being used widely for lacquer-coated glassine because of their brilliance and clean color.

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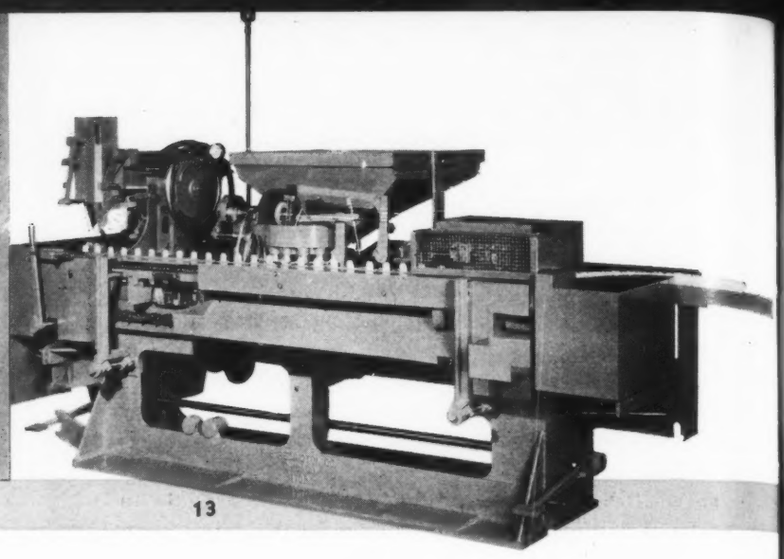
10 & 11—D. Goldenberg's familiar Peanut Chew is appearing in its newly designed counter display box and a redesigned glassine wrapper emphasizing company and product name. Color areas are simplified and thus provide greater counter display.

12



13

12 & 13—*Small cartons make economical, neat packages for free-flowing confections. These are filled at rate of 120 to 140 per minute on machine which sets up carton, measures and loads candies automatically.*

half during the war—also indicates that new markets must be found for this material. Many forecasters, too, are of the opinion that the supply situation for foil, although it involves only 5% of total aluminum production, presents quite an encouraging picture.

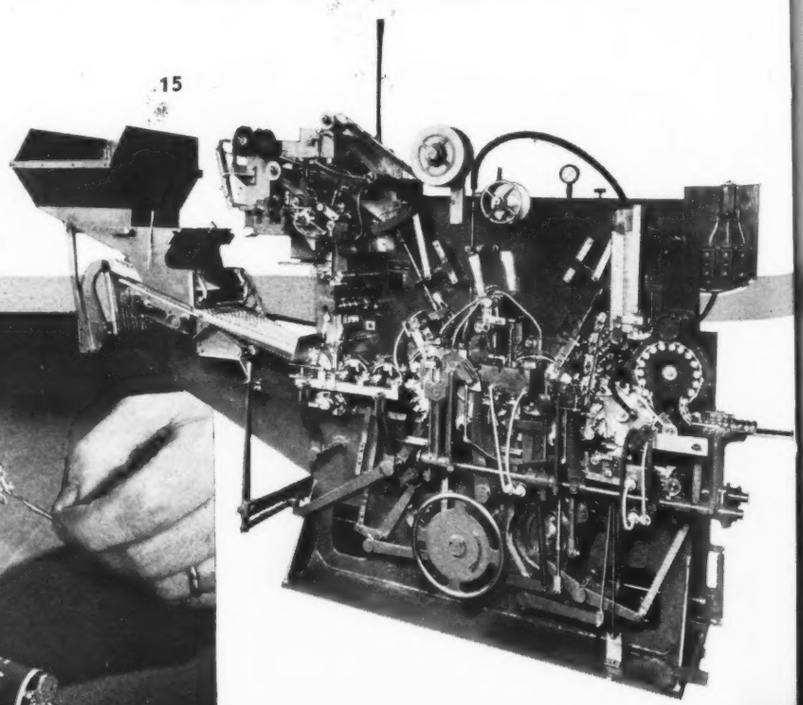
Combinations of foil laminated with paper and wax are also offering the confectionery trade many new opportunities in foil packaging, since the use of wax in the combined sheet gives it heat-sealing properties.

The Charms Company, for example, is making outstanding use of foil in almost all of its postwar packages. This company not only has put its 5-cent fruit drops in brilliantly colored foil wraps, but uses a laminated color-printed foil wrapper for the overwrap of the outer shipping carton containing the individual packages of fruit drops and a counter display unit. The company is also putting out malted milk tablets, each individually wrapped in foil, that look like brilliant silver coins when taken out of their package.

Many richly embossed and color printed foil wraps are being adopted by other makers of bar candies adding greatly to the eye appeal and neatness of these new packages. Foil wrapped chocolate bars, formerly overwrapped with printed paper bands might also be seen without the paper band and with trademark-design printed directly on the foil.

From the Pacific Coast comes word of an interesting new foil tight wrap with tearing tape for a 5-cent carton package of mints put out by Troll, Inc., of Los Angeles. The printed carton is machine wrapped with a laminated foil and paper combination printed on the foil side in two colors, a different color combination identifying the wintergreen package from the peppermint. The feature is the very good heat seal that is achieved on a narrow type of package. Before the wrapper is applied to the package, the machine prints strips of melted paraffin on the inside of the wrapper where the end seals and long seam are made. These paraffin strips are then heat-sealed in the wrapping process. The slot where the easy-opening tape protrudes is also sealed so that the completed package gives good protection—keeps the candies fresh, crisp and flavorful.

15



14 & 15—*Life Saver fruit drops are wrapped complete with tape to open folds of the package, in one operation on this efficiently designed machine at the rate of 100 or more per minute.*

PHOTOS 13, 15, F. B. REDINGTON CO.

14

Glassine papers offer the candy field an excellent packaging medium and suppliers predict a trend to gloss ink for lacquer coated glassine, accelerated by the use of automatic packaging equipment, particularly in view of machine development to handle odd-shaped bars.

Some chocolate coated candies have a tendency to "bloom" in summer months and while this discoloration is not harmful, it is far from appetizing on the candy counter. Opaque glassine has advantages, it is claimed, because it does not allow this discoloration to show through the package and at the same time is said to be less expensive than some other materials. The material has a brilliant glossy appearance and carries bright, clean color printing.

An interesting example of a new lacquer coated glassine wrap is the one just adopted by D. Goldenberg, Inc., of Philadelphia for its familiar Peanut Chew bar, the company's first major package change in generations, they say.

The purpose was to modernize the wrapper in keeping with the company's modern, sunlight factory that covers a city block, and to provide greater eye appeal for mass display.

A leading independent designer was employed for the job who believes that a package should reflect color and motion. First step was to clean up the wrapper designwise without eliminating any of the copy. In the old design each element was about equal in importance. The new one with simpler color areas puts more emphasis on the name, Goldenberg, with no less on Peanut Chew. Price is printed in a star next to the trade name. Colors have been brightened with larger red areas and only a suggestion of a lighter blue to achieve greater attention value and give a more festive appearance to the package. The chocolate color has also been made more realistic and appetizing.

The end result is a package that is improved from the standpoint of appearance in counter dispenser and when in the consumer's hands—aimed to reflect the high quality of the candy.

Merchandise containers were also redesigned at the same time as the package. The new set-up box, telescope type, takes up about half as much counter space, as the old one, although the new one contains the same quantity, 24 candy bars.

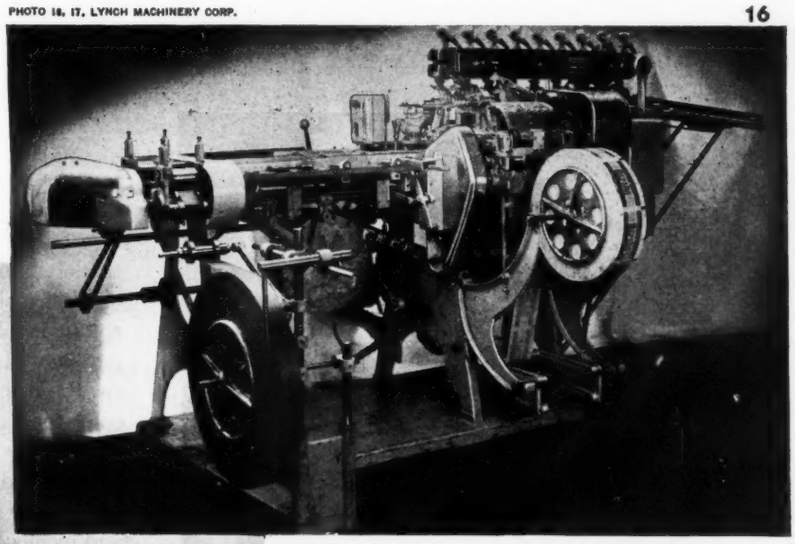
This container, of course is used not only to display the merchandise on the counter but also as a shipping container from manufacturer to jobber. Thus a complete design in four colors is produced not only on the box cover but also on the base of the box so that the design is visible when the cover is removed and the box base is used for the counter merchandiser. The practice is to stack these containers in the jobber's office or warehouse. The containers, therefore, also require strong identity at a distance and this explains the reproduction of the packages on all panels of the box to emphasize further the effectiveness of the wrapper for mass display. The box design may also be adapted for use on vending machines. A yellow background is used for contrast.

More and more attention will be paid in the future to counter shipping units for candy. These units must be compact, take up small counter space, since dealers will give best position to the leading brands and those which are easiest to display.

Converters of foils, cellophane, glassine and other papers are supplying materials to the candy industry as far as their capacities will permit. Materials may be

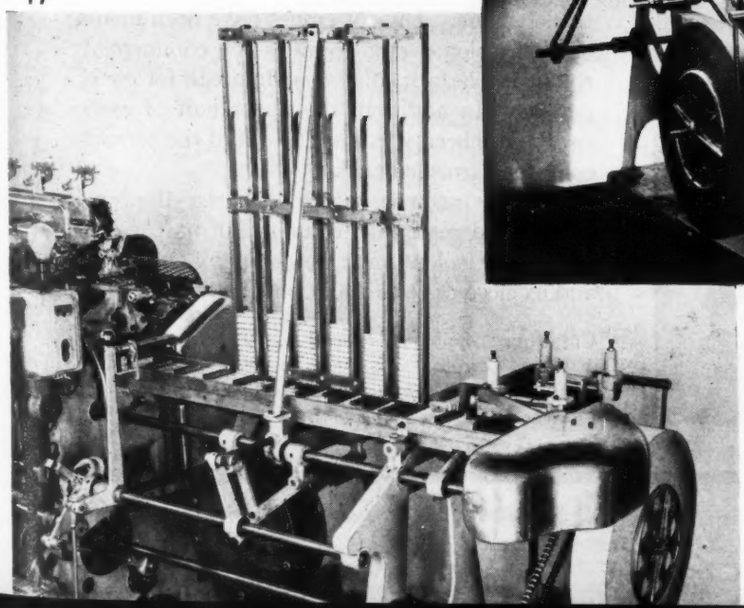
PHOTO 16, 17, LYNCH MACHINERY CORP.

16



16—A straight intake wrapping machine used in candy industry is now equipped with automatic card or boat former and feeder device using roll stock chocolate board paper, which eliminates card magazine that feeds pre-cut flat cards.

17



17—A new multiple stack magazine feeder device for handling two to six pieces is offered as optional equipment on above machine for wrapping, say, six nickel packages of gum, four or five stacks of wafers.

purchased as individual wraps, bags or in continuous rolls. Many special laminations have been developed for the candy industry and will produce improved packages when available.

Wrapping machine manufacturers, too, have on drawing boards and in production machines with many refinements—particularly those which will provide easier adjustments for handling all kinds of wrapping materials: cellophane, Pliofilm, foil, glassine and combination laminations.

There is also a demand for a machine which will take heat-sealing materials from a roll, automatically make a package, fill it with the desired amount of product and heat seal it at the rate of 60 or more packages a minute. Wrapping machines are also being developed for automatically heat-sealing wrappers for bar candies made with chocolate coatings.

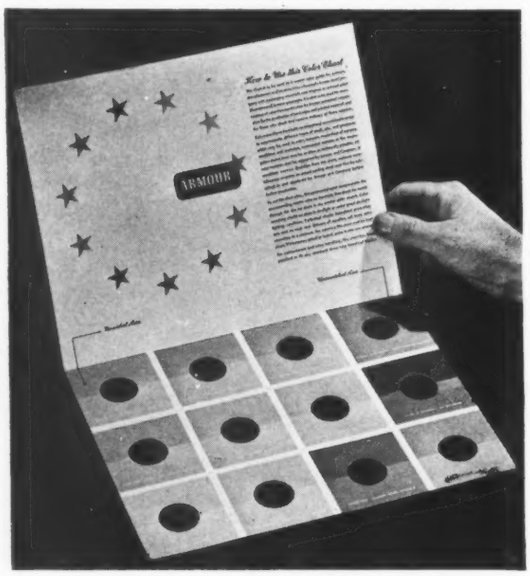
A leading manufacturer of wrapping machines used in the candy field has announced several improvements to the equipment he makes. A straight intake machine is equipped with an automatic card or boat former and feeder device using roll stock chocolate board paper, which eliminates the usual card magazine that feeds precut flat cards. This device can also be installed in old machines made by this company. Among this company's latest developments, too, is a machine for wrapping large-size candy bars, multiple stack biscuits, cookies, crackers, cakes, etc., which have gained favor on confectionery counters. The machine has a capacity of 75 to 80 packages per minute and handles any size from $6\frac{1}{2}$ in. long by $2\frac{1}{2}$ wide by $1\frac{1}{2}$ high up to 12 in. by 4 in. by 4 in.

A multiple stack magazine feeder device for handling two to six pieces is also offered as optional equipment on this company's machines, when it is desired to wrap, say, six nickel packages of gum, four or five stacks of wafers, etc. Another new development is a belt feed device which enables the operator to feed the machine by means of a continuously moving belt instead of having to deposit the product directly in the intake pocket. This device was worked out during the war to assist the Quartermaster Corps to achieve higher speed in packaging rations.

Another machine that has wide application in the candy field produces a package like the 5-cent Life Saver fruit drop all in one operation at the rate of 100 per minute complete with tape to open folds of the package. In this machine the fruit drops, placed in a hopper, are fed in eleven rows. A piece of easy-opening tape is cut from a spool while a self-sealing waxed paper wrapper (the inside one on the Life Saver package) is cut from a roll. The (*Continued on page 174*)

Armour's color chart for perfect match

To indicate the thoroughness with which Armour & Co. has gone into its package redesign program (MODERN PACKAGING, August, 1945, p. 91), it is interesting to note the new color chart just prepared to help insure uniformity of the correct colors on all products.



Part of the attractiveness of the new packages is the extensive use of muted colors contrasted with Armour's maroon and white. In order to maintain these colors throughout, the chart is furnished as a master color guide for printers, manufacturers and ink companies who supply the company with packaging materials and color illustrations.

Twelve major colors are represented, covering the principal food divisions. Each color, developed as the most appropriate and suggestive of the division it represents, has its particular name. Die-cut circles have been made on each color swatch to allow the commercial color sample to be placed underneath for comparison. In addition, the upper half of each swatch has been varnished to afford the correct color for varnished packages.

In every instance, regardless of varying conditions and materials, commercial matches to the master colors must be company-approved and as close as technically possible.

CREDITS: *Designer, Raymond Loewy Associates, New York and Chicago. Assistance in preparation, Magill-Weinsheimer Co., Chicago and Martin Driscoll & Co., Chicago.*

With this issue, MODERN PACKAGING begins its twentieth year. Publishing tradition requires that some kind of notice be taken of such an event. We mention this anniversary in passing; next year, when we reach our twentieth milestone, we'll celebrate it fittingly.

It wasn't a good time to start a new publication, that day about two decades ago, when this magazine began. That was what a lot of people told the venturesome souls that brought MODERN PACKAGING into a crowded world. For that matter, it never is. Probably if they could have foreseen the world's greatest depression and history's worst war, they might have quailed.

There were forty-eight pages in the first issue. Current regular issues are more than four times that size—some special numbers have been more than six times as large. This growth reflects the progress made in packaging and the position of importance it has come to hold in the business world. The packaging of merchandise was of course not new in 1927; but it would be interesting to know the percentage of merchandise sold in packaged form then as compared with that of today. Quantitatively, enormous progress has been made.

But the growth hasn't been merely quantitative. MODERN PACKAGING—then, as now, an "idea" magazine—discussed subjects that did not differ greatly from the packaging problems of today. One of the early articles defined the functions of packaging as "dependability, attractiveness, convenience, economy." Those basic principles still constitute the fundamentals of packaging—but a lot more people realize that fact, and more careful thought is devoted to attaining them for a wider number of products. A vastly greater proportion of the consuming public is reaping the benefits.

There have been advances in external design that go much deeper than surface appearance. Consumer desires, translated into legal requirements, have resulted in packages that tell a dependable story about producer, quantity of contents, uses, ingredients. Designers, too, have utilized package surface in a manner that makes for quicker identity, which means greater consumer convenience. Perhaps a factor in influencing such forward steps has been MODERN PACKAGING's constant emphasis on the true functions of the package.

The materials of packaging haven't changed much, but today there is a more accurate understanding of functions and properties. Today scientific research and technical information play a more important part. The fortunate possessor of a file of those early numbers can make interesting comparisons with today's materials, because "tip-ons" were used from the very start. Particularly interesting are the samples of fancy box paper. "Age cannot wither nor custom stale their infinite variety," but the samples are not restricted to decorative material—there is a sheet in the very first volume which is a laminate of kraft, foil and asphalt—a combination not "discovered" by many packagers until World War II was well on its way.

Looking back through these early issues, one is deeply impressed by the tremendous breadth that has always characterized the field. Many hundreds of industries are directly concerned with packaging, though they may have nothing else in common. They call on several hundred types of suppliers, and these in turn have few points in common. Among these industries and their suppliers, remoteness is inevitable. This magazine, from its very first issue, has proved itself a meeting place where they may all exchange ideas for mutual benefit.

That is still our aim and function. When some future prober turns his scrutiny on the issues of the present, we hope our work of today will stand up as well as that of our predecessors.

—THE EDITORS

A housewares family

When the Kilgore Manufacturing Co. entered the plastics housewares field, it was decided to package the different items in individual folding cartons with the same general format, colors and informative copy because it was felt that harmonizing cartons would help build a recognition for the products as a complete line of housewares rather than as individual items.

As additions were made to the line, the same general carton treatment was used in the same colors—light blue and red. Supplementing the large product illustration on each carton is complete informative copy which goes beyond mere description of each article to explain how it can be used and give pointers on its care. The company considers the latter type of information particularly necessary with plastics products because the average buyer has not yet become fully acquainted with the properties of the different materials and their proper handling.

Pointed sell copy enables the container to do a thorough job of self-merchandising. The Gyro-Mixer carton, for example, lists 12 different ways in which the item may be used. Written instructions on each package are supplemented by clear-cut line drawings.

CREDIT: *Cartons, Columbus Paper Box Co., Inc., Columbus, O.*

DESIGN

Bottle-stand carton

Perhaps you have noticed the perforated cut-out in the back panel of cartons used for Griffin shoe polishes. The die-cut panel when pushed down serves as a base for the bottle when in use and prevents tipping.

Griffin Mfg. Co., Inc., introduced this patented feature on its cartons of conventional construction several years ago as a consumer convenience, but it was found that this package also had exceptional display value.

All the dealer need do is remove the bottles of polish from the cartons and set them up in the die-cut panels for mass display. When this was done, sales of the polish—sold widely in variety stores—increased as much as 300%, the company says, in fact so fast that promotion of the display feature had to be withdrawn until production could catch up with demand.

The patented carton offers wide possibility for counter arrangement and displays the bottles in a way that the consumer can see the colors of the polish through the glass. There is no wasted merchandise, since the bottles may be replaced in the cartons. The panel flap closes automatically when the bottles are replaced.

CREDIT: *Cartons, National Folding Box Co., New Haven, Conn.*

(Page 112)

Packeted Instant Sanka

The newly developed Instant Sanka, packaged in single-service, acetate and aluminum foil laminated envelopes coated with vinylite for heat sealing, is meant especially for the institutional trade—particularly for the behind-the counter coffee maker.

The envelope, with an orange background lettered in black (to resemble the familiar Sanka package) contains two grams of the powdered, soluble decaffeinated coffee—sufficient to make one average cup. Through the use of an electric eye each label is centered on the packet while the 37 word directions message on the back is a continuous print, the wrapping machine cutting it wherever the blade happens to fall, and yet assuring one full set of directions to each packet.

Thirty-six envelopes are packed in a one-piece paperboard carton, cut, scored and slit so that its sides, top and bottom fold and tuck in with the use of glue on one side only.

The carton opens into a display container designed to be set up near the source of boiling water in the restaurant, drug store or lunch room as a customer reminder as well as a convenience for the user.

CREDITS: *Foil lamination, The Dobeckmun Co., Cleveland, Ohio. Packaging Machinery, Stokes & Smith, Philadelphia, Pa.*

HISTORIES

Swedish cheese dispenser

From Sweden comes this convolutely-wound fibre tube for processed cheese. A push-up bottom, a heat-sealing top and a slicing string make the container an unusually convenient one for consumer use.

According to Norrmalms Livsmedels AB, Stockholm, the dairy producing the cheese, consumer acceptance has been so tremendous that they have been hard put to keep up with orders.

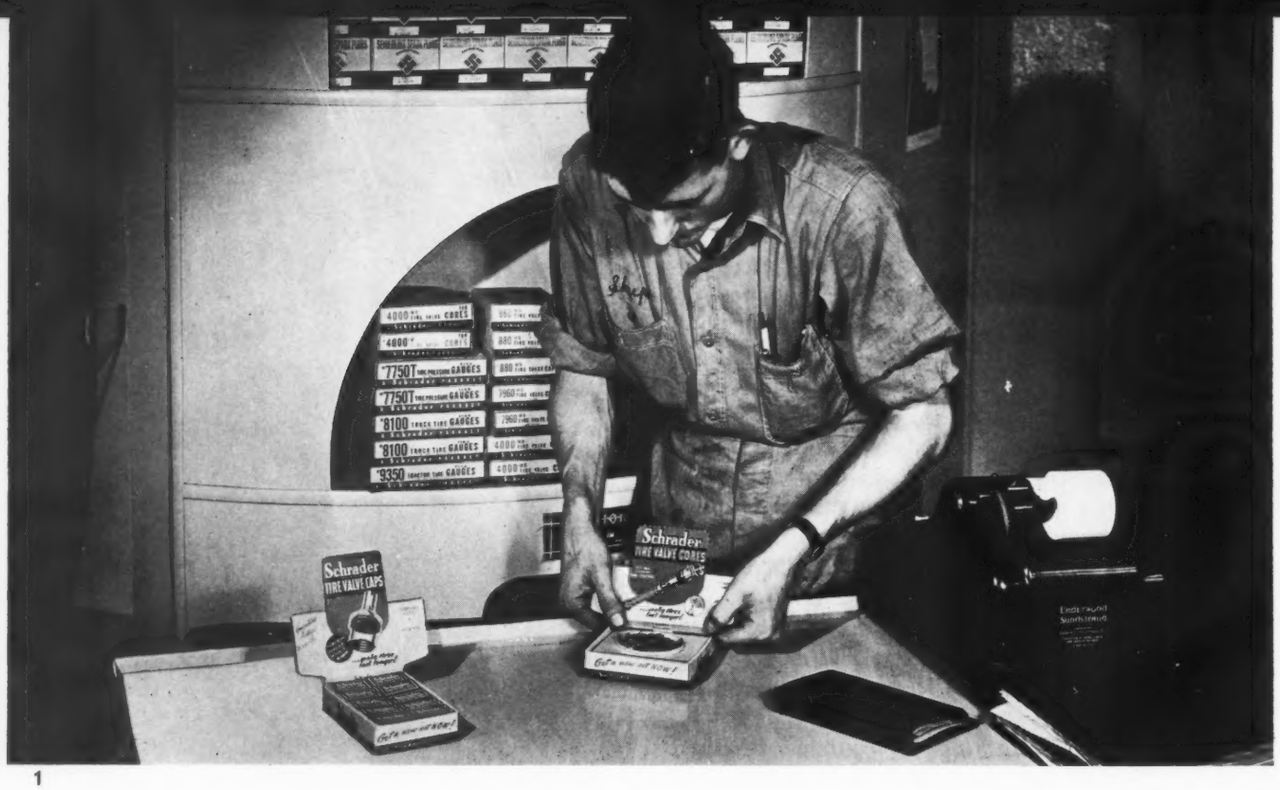
The fibre tube is lined throughout with aluminum foil and the paper top is waxed so that it can be heat sealed. The processed cheese is poured into the container from the bottom and the heat of the liquid product seals the top. The aluminum-lined bottom is then inserted to finish the package.

In use the bottom is pushed up to the required amount, the string wound around the cheese and pulled to cut off any number of even slices required. For storage the top may be replaced to protect the remainder of the cheese until needed.

In this particular case, trade name and other labeling information is printed directly on the outer fibre container but a separate printed over-wrap could be used.

CREDIT: *Package, Akerlund & Rausing, Lund, Sweden.*

(Page 113)



1

Strong colors, good design and effective selling copy encourage dealers to set up the new Schrader cartons on their front counters. Reserve stock on the shelf behind, is readily identified by the new easy-to-read end labeling. Caps and cores come in both bulk and boxes of five; both types are in display cartons.

Package at work . . . a salesman for Schrader's

ASCHRADER'S Son of Brooklyn, a division of Scovill Manufacturing Co., counts its weekly production of tire valve cores and caps in the millions. It supplies the major part of the nation's consumption of these items, and these valves and parts are the mainstay of a business which, nevertheless, includes more than a hundred other products used in tire production, servicing and maintenance.

Possibly because its principal products dominate the field, the Schrader company had never given much thought to display packaging. The bulk of the valve cores and caps were shipped to tire repairmen, 100 to a box, in small telescope-type folding boxes, printed a dull blue and red carrying the name "Schrader" as their sole concession to merchandising. Tire gauges and other items used and sold by garages and service stations were similarly boxed.

In recent years, some effort at consumer sales had been made by putting cores and caps in boxes of five, with the suggestion that the wise motorist should carry a set of spares. But still there was no disposition to regard the package itself as a merchandising and advertising force. Not a single word of sales copy appeared on any of the packages, and there were no counter cards or display cartons—no sales aids of any kind.

(*Page 114*)

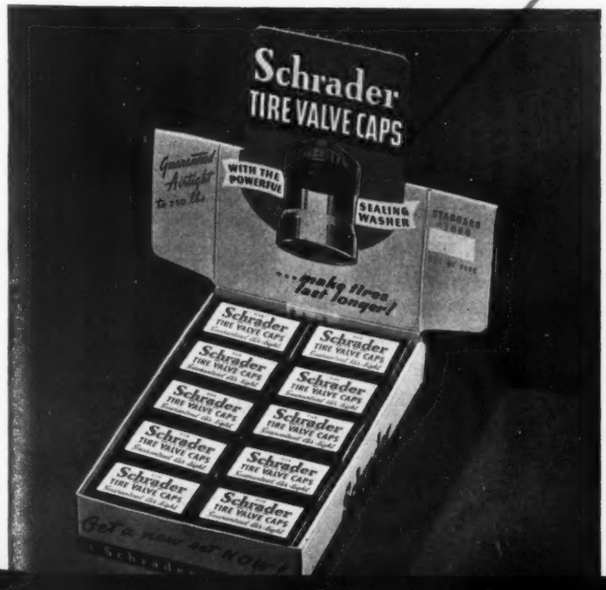
Not having been shown anything better, the dealer appeared satisfied with this. He used the caps and cores mainly in his tire-repair shop, as routine replacements on every tube repair job, and it was handy just to reach into a bulk box on the bench. In his salesroom, he'd keep an open box behind the cash register, and for the infrequent customer who'd ask for a couple of spare "valve insides," he'd just dip into the box, drop a couple in the customer's hand, and ring up a dime.

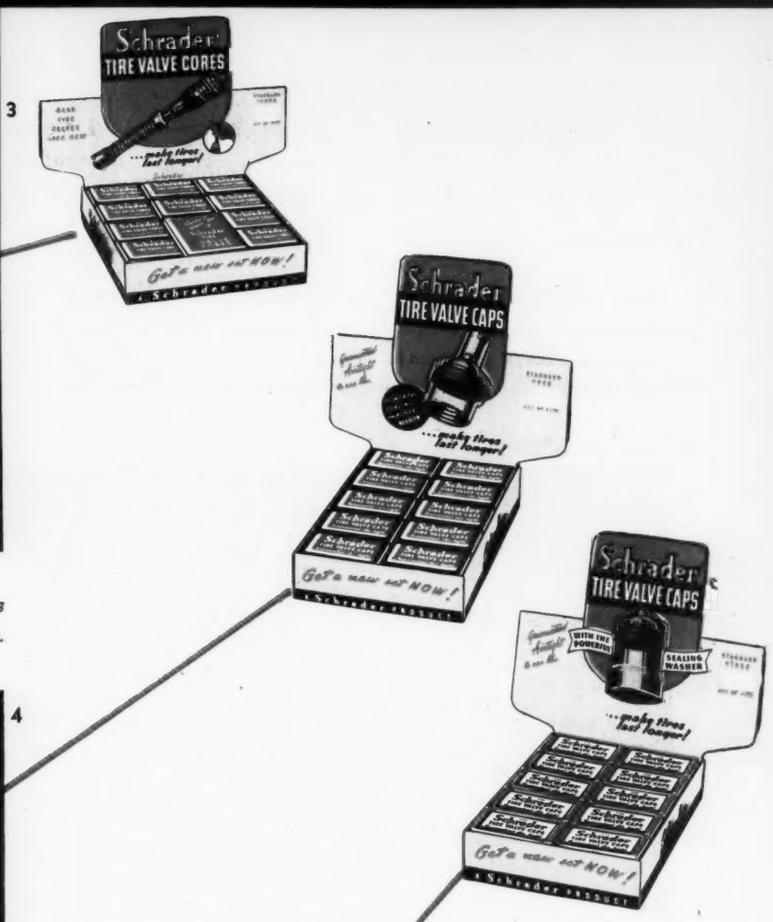
THE OLD

2

Dummy platform of valve core carton carries extra sales message, makes display look bigger. Encourages net sales.

(Above and below) Two types of valve caps, packaged in sets of five, have similar display features but are distinguished by the reversal of colors on the unit box face.





This type of merchandising—"20 years behind the times," the company now concedes—seemed good enough. Sales were satisfactory. Why change?

There were several reasons why a change had to be considered, and they were ably presented by David Hunter, advertising manager of Schrader, in an analysis and report which eventually brought about the forceful new merchandising packages illustrated on these pages:

1—Lightweight caps and bulk cores were habitually ordered by dealers who used them in their own repair work, and these bulk-packaged caps were too often the ones that they sold at retail—to the detriment of the better-quality line promoted in consumer advertising and preferred to sell, not only for higher dollar volume for the distributor but for greater user-satisfaction.

2—Greater merchandising push, with point-of-sale displays and bright, self-selling packages, would not only sell more of the higher-quality caps and boxed cores, but by association would lend impetus to other lesser-known yet profitable Schrader products, such as tire gauges, truck valves, vulcanizers, tools, spark plugs, tire pumps and airline fittings. Whether he bought these items for his own use or resold them, the dealer would be more friendly toward a company which he felt was working hand-in-hand to help sell his merchandise.

3—The old packages didn't "look their price." A two-inch-square box containing 100 valve cores cost the dealer several dollars, and he got nothing but cores—nothing to help him sell them.

After this analysis of the existing situation, Mr. Hunter went on to outline objectives of a rejuvenated packaging and merchandising program. No. 1, he suggested should be to concentrate on the better quality items and relegate the low-priced ones to shop use, for which

(*Page 115*)

6

Display carton and unit package is typical of those for tire gauges, using pictorial illustration to identify the specific type—for tractor, truck, or automobile.

Sales copy and illustration on new gauge packages is contrasted with the unimaginative old package below, carrying no copy except the name "Schrader." Package has also been made flatter and broader for greater display value.

7

they were originally intended. This could be done by repackaging the desirable items in bright, display boxes and linking these directly to consumer advertising stressing the Schrader mark of quality, while the low-quality items for shop use would be sold only in bulk and in the old style boxes, without promotion—thus being forced to take a back seat. Efforts should be made to sell by the standard brand box of five, for both caps and cores, and (in the case of cores) in units of 100 (20 boxes) rather than 50 as in the past.

As for the design of the new packages, the basic objective was to get the package out of the "20 years behind the times" class so that it would:

1—Look to the dealer like the price he pays for it, and thereby stimulate his interest in displaying.

2—Look to the public like quality equivalent to that of the product itself.

3—Look bigger, brighter, more colorful and be fixed for display as well as for shipping and stocking, with a display face performing four basic sales functions: (a) attract the eye; (b) tell the product story; (c) create desire to own and (d) stimulate buying action.

Advertising then, Mr. Hunter concluded, should be steered toward pushing a top quality product in a "new dress" which would be a mark of quality. In national advertising the consumer should be shown the new display packages, in color, and urged to "Look for this identifying display—at your dealer's or next time you stop for gas." The consumer should be convinced that it would pay him to look for this better-quality product. This advertising, it was felt, together with the bright colors of handy display boxes, would act also on the dealer—impell him to set the display boxes up on his counter in a prominent place, to *sell* Schrader products.

Finally, all cataloging and other offer-acceptance printed material of the company should show the new packages and steer the initial writing of all cap and core orders toward the sales objectives listed above.

With the objectives thus clearly in mind, a box designer and the company's package suppliers were called in to work out the details of the display cartons. A simple and familiar folding paperboard carton, in which the die-cut top with tuck-in flaps folds back to form a display back with extended wings, was decided upon, and small paper set-up boxes with sleeve-type covers were adopted for the sets of five caps and cores.

Much thought was given to the illustrations and wording to appear on the display panel and on the end panels of the carton, as well as the colors. After tests, a bright yellow and bright red combination was chosen as the most attention-compelling.

Illustrations for the cap display panels (Figs. 4 and 5) feature a magnified photo drawing, with a blurb calling attention to the "powerful sealing washer inside." The customer is reminded that Schrader caps " . . . make tires last longer!" and that they are "guaranteed airtight to 250 lbs." To stimulate the final buying impulse, front-end panels of all the cap boxes carry the

bold suggestion: "Put on a new set TODAY!" or "Get a new set NOW!"

Stock numbers, descriptions and quantities—information of interest only to the dealer—is concisely printed on the back-end panel (Fig. 1). It is printed large enough and legibly enough to be read at a distance when a closed carton is to be selected from the shelf.

Boxes for valve cores and tire gauges carry the same predominant thought: "Makes tires last longer!" and they are pictorialized with blown-up, precise illustrations of the product and suggestive phrases such as "Make tire valves like new . . . fit all standard tire valves" (for the valve cores), and "tells when you need air . . . precision made for accuracy" (for the gauges).

Considerable thought also was given to giving the display cartons maximum bulk to suggest greater value. In the valve core carton, for instance (Fig. 3), which is arranged in two layers of 10 unit boxes each, a dummy platform, taking a space equal to four boxes, is inserted to increase the expanse of the counter display and is employed as a salesman to put across the suggestion: "Carry a spare box of Schrader Tire Valve Cores."

In addition to the display cartons holding 20 boxes of five cores or caps, it was decided to add bulk packages which would serve equally well as displays and as a handy container for shop use. On the counter (see Fig. 1), these would take care of those customers who insisted on buying less than a set of five.

One hundred valve cores do not bulk very large when packed loose, so a platform was arranged in the base of the carton, printed in yellow with concentric white circles narrowing down to a relatively small circular center well (a "bull's-eye") in which the cores are placed.

For caps, an ingenious platform was arranged in the base of the carton (Fig. 9). At the front, it comes up flush with the top of the carton tray in a one-inch strip perforated with five die-cut holes in which the dealer can insert caps for individual display (incidentally, still stressing the idea of "five at a time"). For the remainder of its length, the platform drops down to about half the depth of the carton tray, so that the remaining 95 caps, arranged in a jumbled mass, will fill the package.

Although with the tuck-in flaps which all the cartons have, a shipping sleeve is not really necessary, one is currently being used for the double purpose of keeping the carton clean and carrying to the dealer instructions on setting up the display as well as reminding him that Schrader is doing an aggressive merchandising job for him (see Fig. 8). The dealer is reminded that the carton is equally useful as a counter display or workbench box.

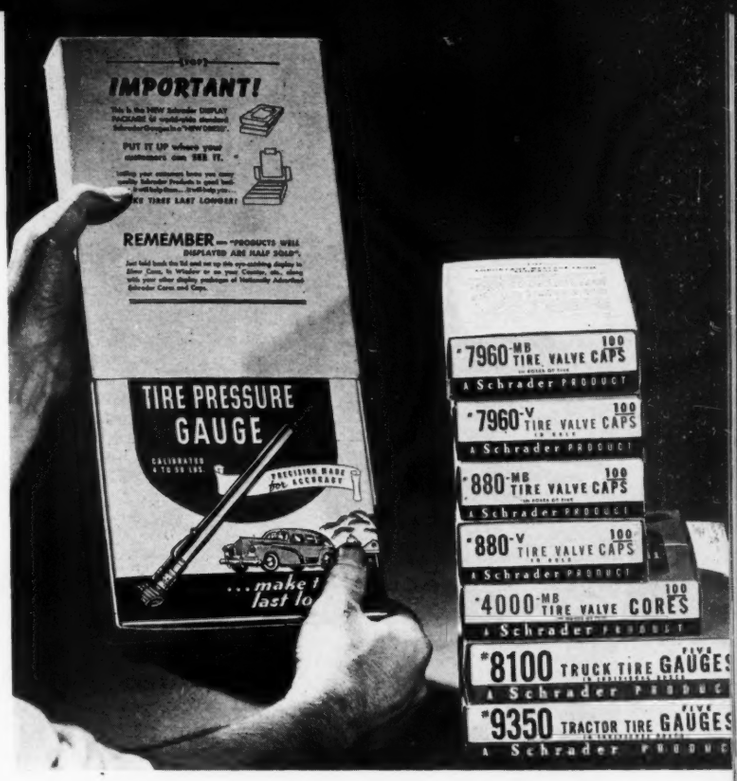
At present the new package is limited to eleven catalog numbers which are the biggest consumer items in the Schrader line. These incluse six packages for valve caps, two for cores, and one each for gauges intended for passenger car, truck and tractor tires.

All of these packages are now moving out to dealers and a consumer advertising campaign starts soon.

When the first samples of the new packages were delivered, Mr. Hunter set them up alongside their opposite old numbers and drew up the convincing compari-

(Page 117)

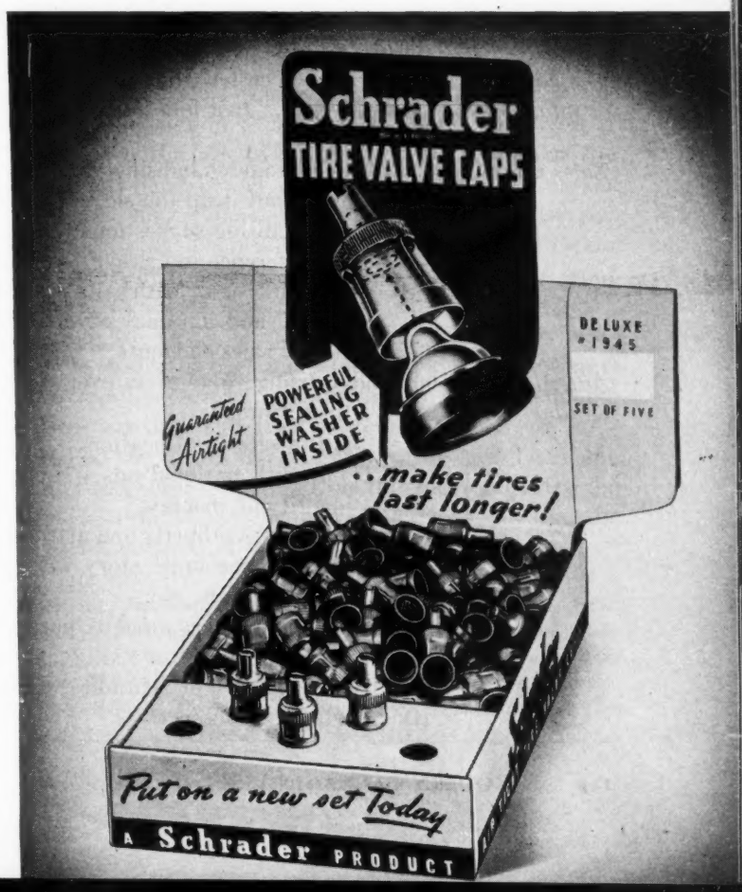
8



Each display carton is shipped in a slip-on sleeve carrying the instructions for setting it up and copy encouraging the dealer to tie in with the national advertising by putting this display package in a prominent place.

Illustrative of care taken for greater display value is this bulk carton for bulk caps having die-cut platform in front and half-depth platform behind. Purpose of this construction is to make a handful of caps look like a lot.

9



10

These ads are currently running in a wide range of tire trade publications to acquaint Schrader dealers with the new packaging (illustrated in color) and encourage them to tie in with the aggressive new sales program.

son shown in the table at the bottom of this page.

Having studied the histories of other repackaging jobs of a similar nature, the Schrader company is confident that this package modernization will quickly be reflected in increased sales. And it has the crowning satisfaction of knowing that this obviously improved packaging has been achieved at virtually no greater cost than the old! It has been found that it actually costs less to put out the 20 unit-packages in the new colorful display carton than it did to put up the same quantity of caps in two of the old drab 50 boxes.

CREDITS: *Designs by Mitchell Studio, New York. Display cartons by Crescent Box Corp., Philadelphia. Small unit boxes: setup tray by F. N. Burt Co., Inc., Buffalo; sleeves by Wilkata Folding Box Co., Kearny, N. J. Circular well for bulk cores by Cross Paper Products Co., New York.*

	NEW PACKAGE	OLD PACKAGE
Color	Bright 4 colors—red, yellow, black and varnish. Harmonizes with almost any background.	Dull 2 colors—red and blue. No varnish. Definite limitations as to color harmonies.
Size	Full size—modern, convenient. Perfect for shelf stock. Looks more than money's worth.	Small; does not look like money's worth. Hard to store in stock shelves.
Identity	Perfect identification. Large sample number clearly printed in bold red against bright yellow.	Poor identification on shelf. Hard to read; easily confused, bulk with box type.
Display value	Display type is easiest to read and most popular in retail field. Just fold lid back.	Display values poorest known in advertising. Will not set up into a display. Does not show product, its features, etc.
Sales value	100% sales and merchandising values: (a) How to put it up (on sleeve). (b) Merchandising suggestions (on sleeve). (c) Cross reference (on sleeve). (d) Teamwork tie-in with sales promotion (on sleeve) and national advertising. (e) All basic sales elements.	Sales value nil. No message, no cross reference. A *service* not a sales package; not even one element of a sale.
Advertising value	100% advertising value gives every opportunity to encourage: (a) Point-of-sale identification. (b) Tie-in with national ads—"Look for this identifying display." (c) Photographs properly and attractively and tells the consumer story without words in printed ads, etc. (d) New and modern, makes postwar news, gets publicity, etc. (e) Ulterior motive of Schrader—turnover. (f) Meets all our objectives.	Advertising value negative; below par.

Two shades of gray blue and embossed basket-weave design strengthen identity and give feminine appeal.

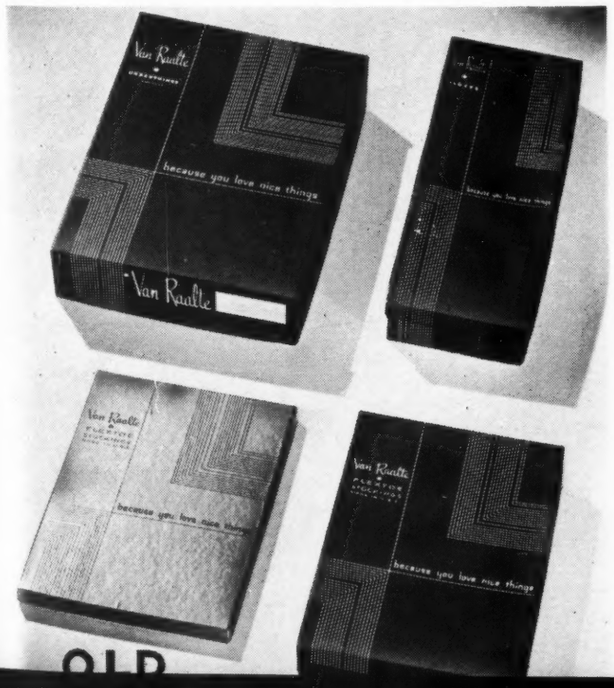
New Van Raalte boxes *unite a prominent family*

A prominent new textile package family is the one for the three lines of Van Raalte products—gloves, stockings and underthings.

The whole packaging plan is one of adopting uniform design and color to coordinate the three lines and to strengthen their identity in retail departments as well as in the minds of shoppers.

The new color scheme is also selected for feminine appeal and to blend well with modern store fixtures.

Old packages did not blend with new store fixtures.

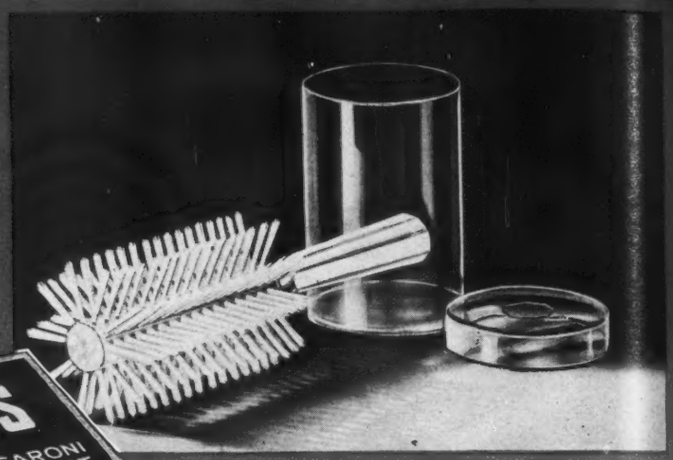


The redesign is a decided change from the previous brown and gold packages used by Van Raalte. The cover papers for the new set-up boxes are all-over embossed in a basket-weave pattern. Printing is in two shades of soft gray blue. The major portion of the boxes is in the darker shade of blue with reverse printing in white. The smaller portion is printed in the harmonizing lighter blue only, so that background is white with the identifying name Van Raalte in the upper left-hand corner of each printed in the darker shade of blue. The company's slogan, "Because you love nice things" is printed at the bottom of the darker blue panel on each box. Reverse printing of the word Van Raalte on the end is the only other printed copy.

Inside the boxes, the products are protected by folds of custom-designed glazed tissue paper. The design is an over-all pattern of line drawings depicting feminine figures wearing Van Raalte products which are indicated on the figures by solid color printing. The name Van Raalte scatter-printed on the sheet provides the trade identification. Printed bands, also carrying the basket-weave motif, hold the merchandise in place.

CREDITS: *Boxwraps, Central Lithograph Co., Cleveland, Ohio. Hosiery boxes, Niagara Box Factory, Inc., New York, and Cooke Paper Box Co., Athens, Tenn. Underwear boxes, The Warder Paper Box Co., Niagara Falls, N. Y. Glove boxes, Ranburn Co., Tonawanda, N. Y. Glazed printed tissue, Whiteford Paper Co., N. Y., and Essanay Printing & Stationery Co., Inc., N. Y.*

(Page 119)



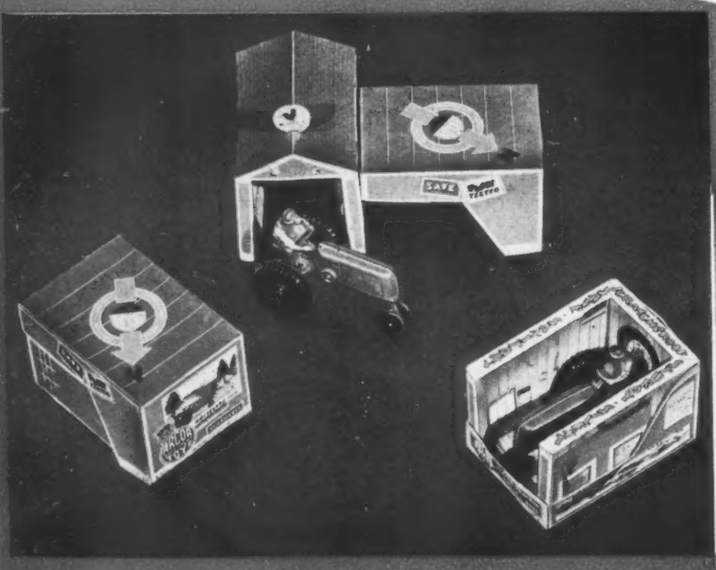
PACKAGING PAGEANT

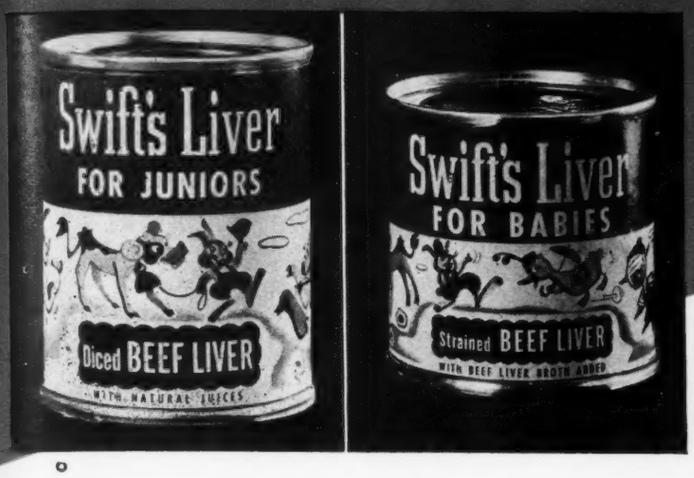
1 Roy Goff & Co., Inc., of West Chester, Pa., found that when changing the name of its product from Beef and Biscuit to Meat and Biscuit a redesign of the label seemed imperative. It was decided to retain as much of the old design (right) as possible and tie the words Goff and Quality together. The Scottie dog was simplified and copy now performs a decorative function without cluttering the label. Designer, Margery Markley, N. Y. Printing, G. S. Michener, West Chester, Pa.

2 Yellow and green decorate the folding carton for Creamettes, a macaroni product of The Creamette Co., Minneapolis, Minn. A cellophane window cut in the top and side of the box adds display appeal without detracting from the structural strength of the package. Cartons, Waldorf Paper Products Co., St. Paul, Minn.

3 A circular acetate container has been adopted by Hughes Brushes, Inc., to package and protect a new hairbrush—"All-a-round"—with bristles going completely around the handle. The opening in the cover of the container allows the handle to protrude while the bristles are protected. The container is suggested not only for display purposes but as a permanent protection in the home.

4 The Auburn Rubber Corp. has returned to the manufacture of its line of Arcor molded rubber toys—with an





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added merchandising attraction. Each one of the toys is provided with a box which is a functional part of the toy. Illustrated is the box for the tractor showing how it can open into a shed. Designer, Wm. P. Frankenstein, Cincinnati, O.

5 The six new types of Lektrolite flameless lighters are being packaged in these recently redesigned cartons in two color combinations—blue, red and gold, and brown, red and gold. A little flap across the base of the box covers the bottle of fluid and presents a space for copy and trademark. Carton, Robert Gair Co., Inc., New York.

6 Cavorting, gaily colored animals, handled in cartoon style, enliven the attractive labels adopted by Swift & Co., for its newly developed line of canned meats for babies and juniors. The diced meats for juniors are packed in 5-oz. vacuum tins and the strained products for baby in $3^1/_2$-oz. tins. Blue lettering and panels on the junior meats clearly distinguish them from the baby meats which use red, but the similarity of layout and typography leave no doubt that all are one family. Cans, American Can Co., New York.

7 Wright's Lacelets—small lace applique designs—are fastened to a black card with a dab of adhesive and overwrapped with cellophane. Reverse white printing shows four applications of the trimmings. The rear face of the card is a line drawing showing a number of the many uses to which these designs may be put.

8 A small acetate vial mounted on a $3^1/_4$-in. by $2^1/_4$-in. black and white reverse printed card holds a small metal pellet which contains two spare Dryco lighter flints. The purpose of the metal bullet-shaped pellet is to insert into the cotton packing of the lighter, keeping the flints handy and dry at the same time.

9 The Thermoid Co. packages four re-lined brake shoes in a patent white No. 1 all-kraft folding carton with lock flaps and an air-brush outline of a brake shoe. Illustrated in red and black, it emphasizes brand identification and carries diagrams and copy emphasizing the precision processing of the shoes as well as information on brake care. Carton, Trenton Folding Box Co., Trenton, N. J.

10 The Zephyr American Corp., in designing a set-up box for Deskmates, solved the problem of packaging and displaying several odd-shaped units by an ingenious method of interior packing. By using a double platform a maximum portion of each item is displayed. Because the Autodex and Swivodex are curved, a stop was cut-scored in the front portion of the cut-out to prevent them from wedging themselves under the platform. The two vials of points and the penholder are held in place by elastic cord. To prevent shifting, the height of the cover was designed to accomodate the tallest item and a dummy folding carton was pasted to the underside of the cover to hold down the two shallower items. Since one of the items is an eighth of an inch lower than the other a trick double flap on the end of the dummy box gives the additional height without the need for an additional dummy carton. Designer of wrap, Henry Stahlhut, New York. Printer, Guide Printing Co., Inc., New York. Set-up box, Brick & Ballerstein, Inc., New York. Folding carton, Acme Folding Box Co., Inc., New York. Vials, Celluplastic Corp., Newark, N. J. Platform, Fountain Die Cutting Co., New York.

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SUN-MAID RAISINS
15 OZ NET
SUN-MAID RAISINS
SEEDLESS
NOTAWUN
Raisins
VALLEY
SEEDLESS
RAISINS
PHOENIX
Holly
RAISINS
15 OZ. NET
Holly
SEEDLESS
RAISINS
Ready to Mix
HONEYBUNCH
BRAND
Sugaripe
RAISINS
Fewel's
RAISINS
SHAMROCK
SEEDED MUSCAT
RAISINS
Holly
RAISINS
15 OZ. NET
SEEDED
RAISINS
Ready to Mix
CINDERELLA
Seedless RAISINS
MISSION
THOMPSON SEEDLESS
CINDERELLA
RAISINS
EUREKA
GOLDEN SEEDLESS
RAISINS
DRIED FRUIT
BOWL O'BEANS
California dried
LARGE LIMAS
MISSION
LARGE CALIFORNIA
PRUNES
MISSION BRAND
PRUNES
PANSY
BRAND
PRUNES
Sugaripe
DRIED FRUIT
Sugaripe
PEACHES
SARATOGA
BRAND
LARGE SANTA CLARA
PRUNES
CONTENTS TWO POUNDS
3% ADDED MOISTURE
PACKED BY MAYFAIR PACKING CO. SAN JOSE, CALIFORNIA
SULTAN
DRIED FIGS
SULTAN
PYRAMID
BRAND
Sugaripe

PACKAGING

Product protection, identity and shelf competition are the key factors controlling the expanding consumer packaging developments in the West Coast dried fruit industry. Leading processors are adapting the functional properties of a wide range of packaging materials and recent machinery developments, to exacting requirements of all varieties of dried fruits and raisins.

Some idea of the comparative position this industry occupies in the national packaging scene may be realized from the fact that from approximately 645,000 acres devoted to deciduous fruits and grapes in California alone, upwards of 500,000 tons of dried fruit are processed annually. Representing half of the total crop volume, the value of the processed tonnage (95% of the nation's output) is said to approximate 200 million dollars at the current market level.

In the last ten years processors have become increasingly aware of the sales-appeal advantages of smart attractive, consumer packages, but it was not until 1941 that the present industry-wide trend toward smaller consumer units for convenience of distributors and housewives became evident. In spite of curtailments of both materials and new packaging machinery during the war and since, several significant new dried fruit packages and packaging operations have made their appearance. Others, in the planning stage and temporarily shelved, are currently being expedited.

Dried fruits and raisins have always posed difficult problems in respect to retention of sugar and moisture. In overcoming these difficulties processors have elevated packaging to a highly scientific plane. Through the medium of their packages, in conjunction with processing, many have cut cooking time to a fraction of that formerly necessary with dried fruit sold in bulk. Modern packaging results in a softer, juicier fruit—a fruit that is sweeter and richer flavored.

A far cry from the 100-lb. barrels and cotton bags employed during the formative stages of the dried fruit industry are today's button style and triple-sealed cartons, cellophane bags, over-wrapped trays, cellophane-wrapped brick or tile-shaped units, heat-sealed Pliofilm-lined bags, and various foil packages.

The California Prune and Apricot Growers Assn., San Jose, pioneered consumer packaging in the dried fruit field some 25 years ago. A printed shell without inner liner or outside wrapping, this early prune package was the beginning of an evolutionary packaging development which has culminated in an aluminum-foil-wrapped package of exceptional beauty and value for the company's Sunsweet brand of dried fruits.

This cooperative firm, said to be the largest packer of prunes and apricots in the field, was among the first to use foil, 16 years ago. Primarily for product protection, the foil was at that time buried inside the carton structure. A representative of the foil manufacturer suggested bringing it to the outside to take full advantage of the brilliant metalic color.

Gold-colored foil is used as the label-wrap for the firm's premium product of Sunsweet California extra large prunes, while silver-colored foil is used for their medium brand. With the exception of this difference in color and the designation of the specific grade, the label design of the two packages is identical. The foil itself contributes the predominating color of the over-all package background. Structurally, the completed package is made up of a glued carton of the end-opening type, a waxed paper liner, and the foil label-overwrap.

California Prune and Apricot Growers have six fully automatic packaging lines working a double shift on a sixteen-hour basis on prunes alone. Operating at the rate of 40 to 43 per minute and divided equally between one- and two-pound packages, average production reaches 600 cases an hour.

Starting as side-glued flats, the cartons are automatically formed, bottom-sealed and lined, the three successive operations being accomplished by a carton feeder, bottom sealer and liner, respectively. The fruit travels by conveyor to the filling station. The filled carton moves to the weighing station and is then placed on a second conveyor which carries it to a press which mechanically presses the fruit below top score lines. The carton then travels by conveyor first to the top-sealer, where the flaps are automatically folded and

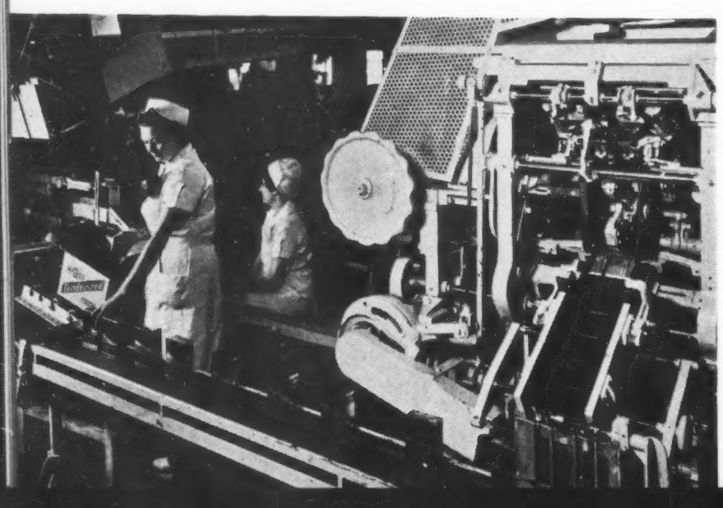
New Richmond-Chase package for prunes is automatically fabricated by a new machine; inner bag of laminated glassine is hermetically sealed and water-vaporproof. It is the result of several year's research seeking to perfect a package to protect pasteurized dried fruits.

Raisin packers stick largely to plain button- or glue-flap carton, but there is a trend toward pictorial illustration. Other processed fruits (below) have modern pictorial labels, protective inner liners or outer wraps.

(*Page 123*)

Sunsweet package is glued end-opening carton, with waxed liner, tightwrap of gold or silver aluminum foil. Product requires retention of 3% added moisture. Firm used foil 16 years ago, but has only recently brought it to the outside of package for its decorative advantage.

Sunsweet operation is one of largest in industry. Above, view of filling, weighing. Changeover is gradually being made to newer equipment consolidating machine operations, eliminating some hand steps. Below, prunes coming off tight-wrap-labeling machine ready for casing.



glued; then under a so-called gluing belt which compresses the freshly sealed top structure finally to an automatic label-wrapping machine. Ejected from the labeler onto a final conveyor, completed packages are carried to the casing table where a girl packs them 24 to the case.

This operation is now being augmented by a popular new machine known as the "double package maker."

Among the first to put the double package maker into operation is the Mayfair Packing Co., of San Jose. This firm is now packaging its Saratoga brand of prunes with two high-speed fully-automatic lines each headed by one of these new machines.

The operation marks the entry of Mayfair Packing Co. into the consumer packaging field. Packaging in one- and two-pound units, the company employs one line for each size.

The double package maker incorporates into one multi-head unit the operations conventionally handled by three machines—the carton feeder, the bottom sealer and the liner. At a rate of from 60 to 70 a minute, the machine produces a glued and lined bottom-sealed carton which is essentially the same as that produced by the three pieces of old-style equipment.

Eliminating the necessity of side-gluing cartons, the machine is designed to perform the entire box-making operation from completely die-cut and scored flat box blanks. One fold is eliminated in forming liner.

The Mayfair container is made up of a parchment liner formed into a bag and spot glued inside the outer carton, which itself is formed, bottom glued and set up around the liner ready for end filling. The box blanks are laminated carboard impregnated with an asphalt compound which acts as a moisture barrier.

Four principal operations are involved in making the box. The liners and boxes are formed and glued over a series of mandrels which rotate clockwise. The parchment, fed from a roll, is cut and side-folded around one of these mandrels. At the next station ends are folded. The formed liner then revolves to the third station where the first operation is repeated in side-folding and gluing the cartons around the liners. Revolving to the fourth station, the bottoms are folded and glued, and the lined box is passed along to the conveyor which takes it to the filling station.

The lithographed paper Mayfair labels are the full overwrap type. Contrasting sharply with an over-all background of deep blue-black, the brand name, "Saratoga," appears in white reverse printing over a ribbon of red across the top, while yellow is used for other copy. An effective color-photographic illustration of prunes, silhouetted in an oval of white, provides eye-appeal on the face of the package.

Rosenberg Bros. & Co., San Francisco, founded in 1893, are today said to be the largest of the independent processors in the dried fruit industry. Operating some fifteen packing plants and mills in California and Oregon, this firm packs, in consumer-sized cartons, the entire range of dried cut fruits, dates, currents and raisins.

They were early exponents of consumer packaging,

(*Page 124*)

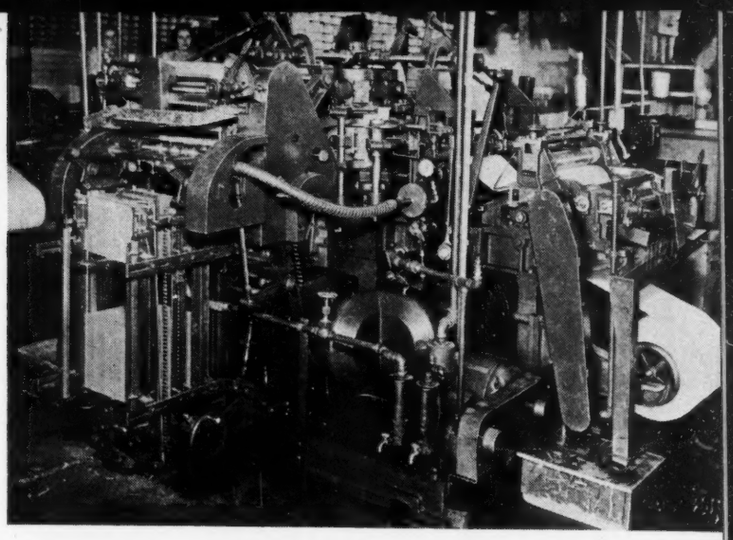
Mayfair Packing's "Saratoga" package is formed on one of newest machines in industry. Asphalt-impregnated carton has parchment liner, full over-wrap sealed label.

and their processes and package materials have undergone much change in recent years. In reviewing a score of packages featuring such famous brands as "Ensign" and "Iris" in their progression of consumer cartons, the latest trend in Rosenberg packages reveals increasing emphasis on brand names, design and product illustration.

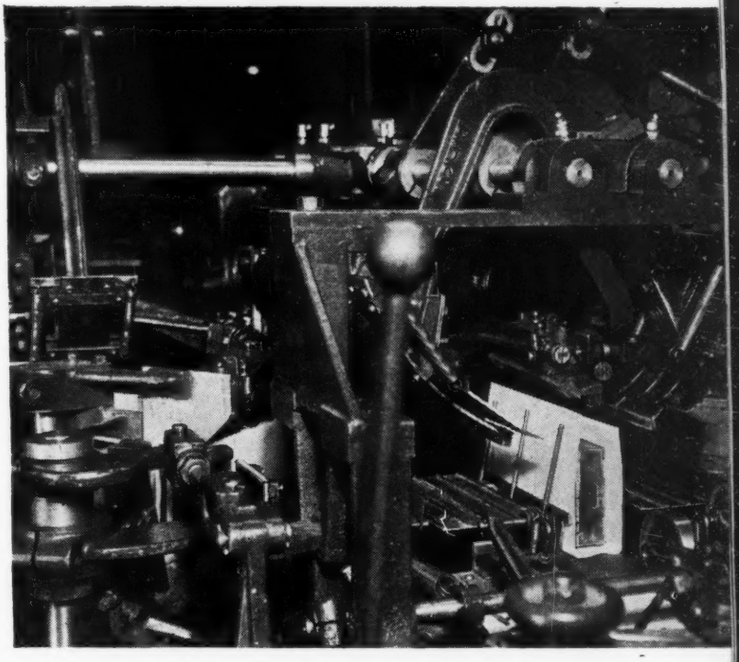
Though relatively new, the firm's "Sugaripe" brand is reported to have become their leader and a best seller among dried fruit package lines. Packed under this brand are a dried fruit compote, apricots, peaches, dried figs, prunes and raisins. Exclusive of raisins, the various fruits are processed through the medium of the company's "Flavo-Fresh" method, a pack claimed to yield a fruit of excellent cooking and eating quality.

Emphasizing "Flavo-Fresh" is a printed seal on the face of the full-overwrapped paper label, which is tied in with the illustration of the product. A bright, lively red is the predominating color of the package background. The copy and side panels appear in an attractive com-

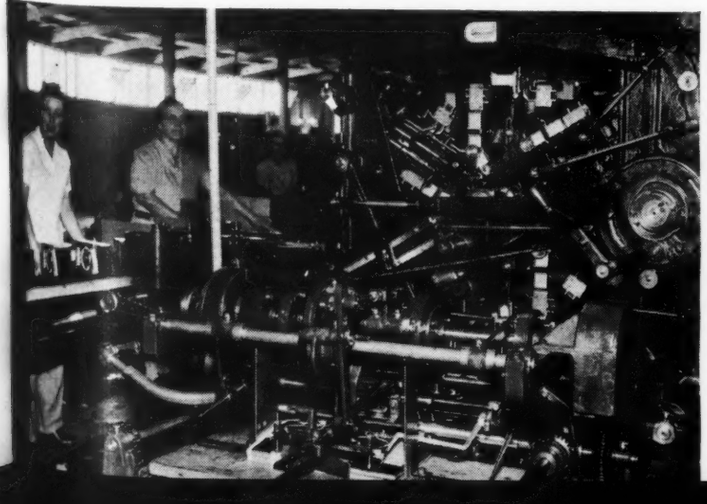
After filling, weighing and top-sealing, overwrap is applied and sealed by this fully automatic machine and completed packages move directly into the shipping cases.

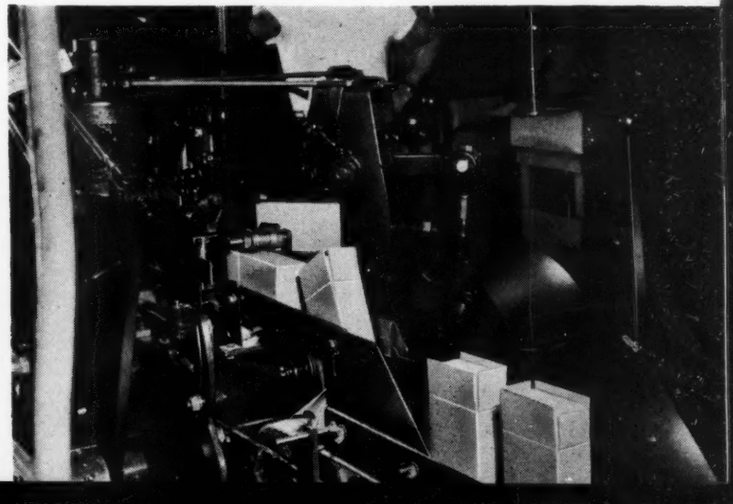


Mayfair's "double package maker" incorporates in one multi-head unit operations usually handled by three machines—setting up glued-end carton from a blank, forming parchment liner bag, spot-gluing liner inside carton.



Forming parchment liner (above). Parchment is cut from roll, sides folded, glued, at right. Machine then rotates to second station (left) for end-folding, sealing. Carton is similarly formed and glued at Stations 3 and 4, and, with liner inserted, packages come off machine (below) at rate of 60 to 70 per min., ready for filling.





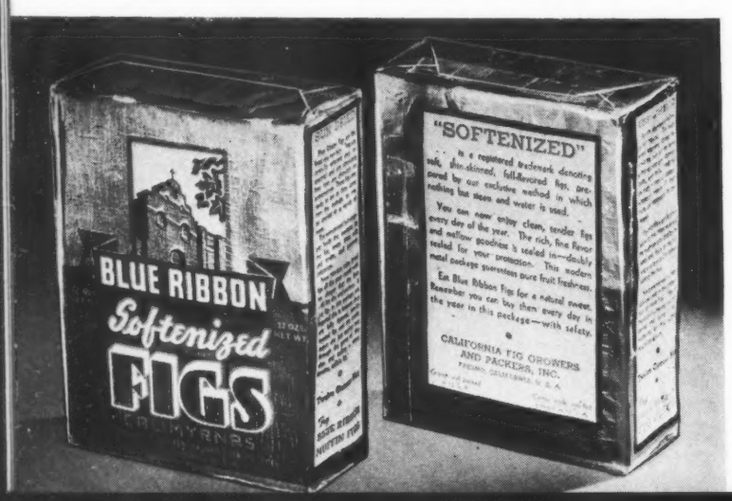
Adoption of "Flav-o-Tainer" Pliofilm-lined bag for top-quality grade of Vagim Packing Co. raisins marks advent of this package in dried-fruit industry. Standard grade is still packed in the button-type carton, shown at left.

bination of buff, blue black and reverse white. The product illustration, colorfully depicting fresh fruit in back with the processed product in the foreground, is lithographed in various colors and screened tints.

Perhaps the most significant package development to date in the field of dried fruits is the new Heart's Delight Pasteurized Prunes package being introduced by Richmond-Chase Co., San Jose, an innovation that seems to create a marked change in the dried fruit industry. This development incorporates an automatically fabricated, moistureproof, hermetically sealed container.

This being a product and packaging development involving pasteurization of the fruit, a container is needed which will preserve the results of the processing. Utilizing the effectiveness of informative labeling, the present label is redesigned to express the advantages of processing and the use of the package. This new

Exacting protection problem for processed figs was solved for California Fig Growers & Packers, Inc., by glued carton of asphalt-laminated board overwrapped with bright gold-colored foil, printed in blue, red and ivory.



View of Vagim eight-station raisin-filling and weighing line, with eight heat-sealers which close new bag package. Bags are then packed directly into shipping cases.

process and package structure is the result of several years of laboratory research on the part of Richmond-Chase and mechanical development on the part of the package supplier in close cooperation with the company. The mechanical equipment which has been developed is owned and controlled by Richmond-Chase for the dried fruit industry.

In the dried fruit industry, raisin packers have been perhaps the most reluctant to make changes in consumer packaging. Comparatively little change has taken place in packaging methods and materials within the past few years. One notable exception to this however, is the recent adoption by the Vagim Packing Co., Fresno, of Pliofilm-lined "Flav-O-Tainer" bags for the firm's "Plump and Meaty" brand of premium raisins.

Prior to this, very little had been done in the way of product protection for raisins. Without adequate protection from loss of moisture, raisins dry out and within the space of a few weeks become comparatively brittle and sugared. This was a weakness of the time-worn, top-glued, one- and two-pound kraft bag—which until recently was the most commonly used package for over 75% of the raisins packed in consumer units—as well as the conventional unlined 15-ounce carton.

In the new Vagim bag, the hermetically sealed Pliofilm liner prevents loss of moisture and allows the fruit to exude carbon dioxide through natural breathing. Retention of the natural syrup within the individual raisins insures a soft, pliable product which remains in top condition throughout the normal storage, shipping, shelf and pantry life according to Vagim officials. While the liner is thus performing these functional requisites, the Pliofilm is protected by outer laminated paper.

Eight semi-automatic filling stations make up the Vagim production line. Carried to hoppers by an overhead conveyor system, the raisins drop into scales which automatically release two pounds (the only size bag being used at present) into the bags, which have been opened or set up by hand and placed in a metal form before filling. Tops are then heat sealed.

Externally, the Vagim package is colorful. A pre-

(*Page 126*)

Simple glue-end carton used by the Peloian Packing Co. for Pel-Pak raisins is handled by new fully automatic filling and weighing machine at rate of 80 per minute.

dominating background of bright yellow tops a base of brilliant red. The brand name, "Plump and Meaty," printed in reverse white with black outlines, stands out prominently against a panel of red on the face.

Only Vagim's premium grade, with a sugar count of 22 to 23, is packaged in the Pliofilm-lined bags. A standard grade is packaged under the same "Plump and Meaty" brand in 11-ounce, button-type cartons.

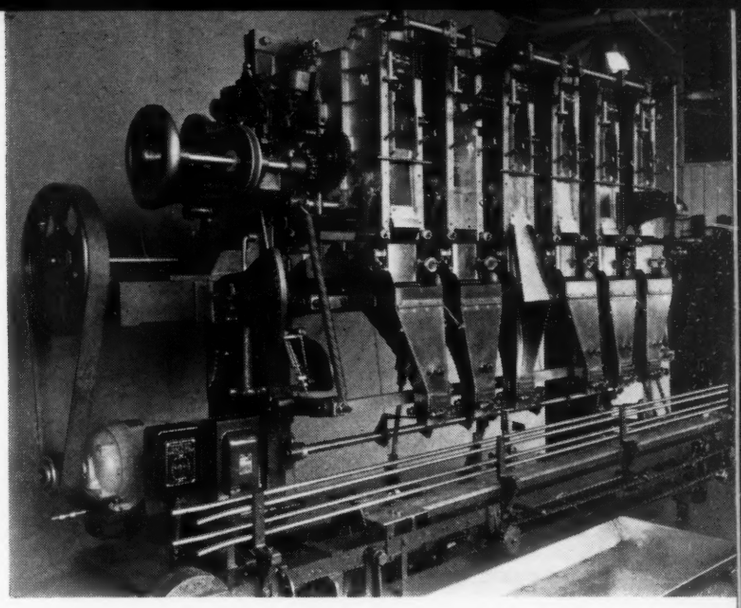
Vagim officials are currently planning the adaption of the bags to the packaging of dried cut fruits, such as peaches, pears and apricots. It is understood that the new package will be of the window type, with a section of the outer paper cover cut away so that the product may be seen through a Pliofilm window.

Another significant development in the raisin-packing industry is an automatic filling and weighing machine, put into operation this year by the Peloian Packing Co., Dinuba, Calif.

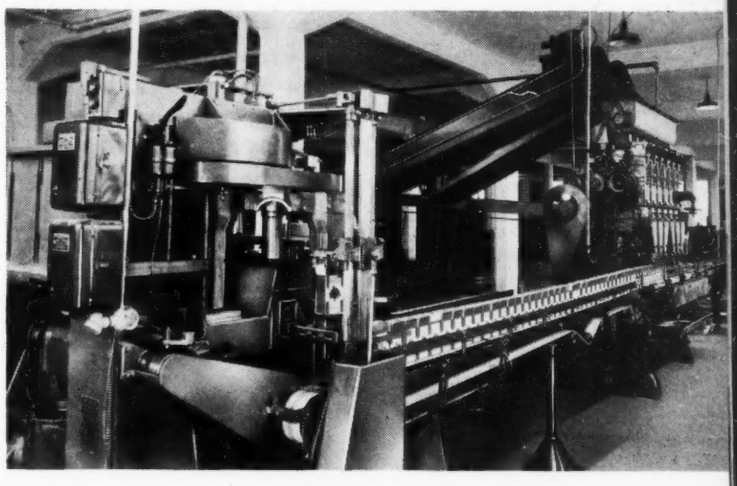
Capable of synchronous operation with automatic carton-making equipment at any desired speed, the new machine makes possible for the first time a fully automatic raisin-packaging line. Up to this time, the weighing and filling of cartons or bags has required manual transfer from scales to conveyors, or other manual functions.

Fed from an overhead hopper, the machine consists of a battery of six automatic fillers incorporating individual feeds, weighing, tripping and filling devices. As used in the Peloian plant, the machine is set up for filling 15-ounce cartons of the end-opening type.

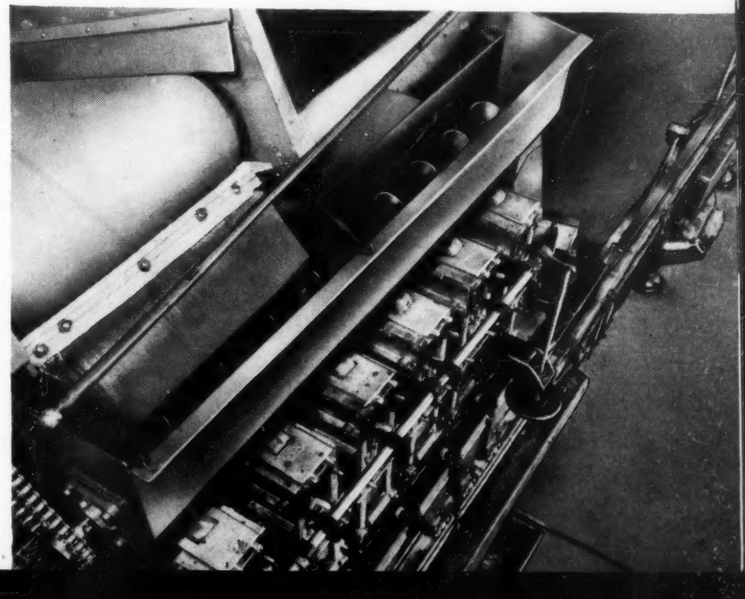
Raisins are fed from the main overhead hopper by means of a slowly turning screw which insures even distribution to supply chambers of individual weighers. From these supply chambers (*Continued on page 176*)



Close-up of Peloian machine, which has six filling heads with individual feeds, weighers, trippers and filling devices. Photo was taken prior to hookup with overhead feeding hopper, with covers left off to show mechanism.



Automatic machine (above right) in position in Peloian packaging line. Ascending conveyor belt carries raisins to large overhead hopper supplying all six filling heads. Surplus raisins drop from hopper to conveyor belt at far right and are returned to starting point. Close-up (below) of worm gear used in primary supply hopper to insure even distribution of raisins to each filling head.



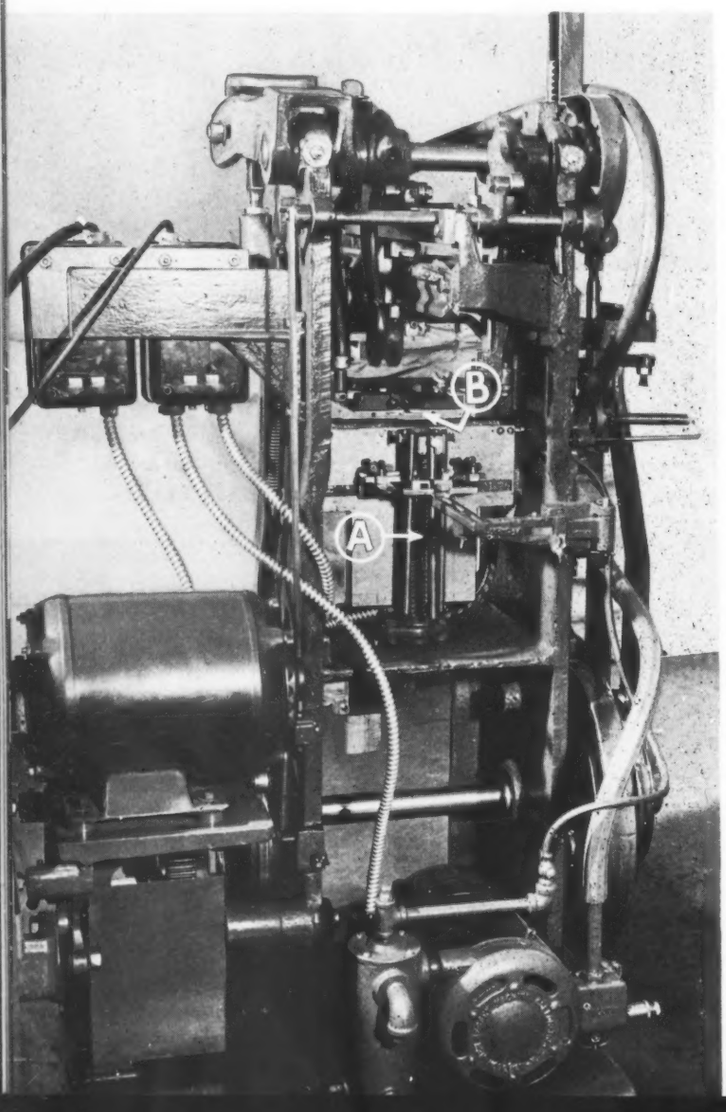
Thermoplastic labeler . . . for bottled products

The pressure of a big and growing backlog of orders has not prevented some of the package machinery manufacturers from devoting considerable attention to the kind of engineering and experimentation on which future progress depends.

For a number of years one of these companies has been working on the problem of thermoplastic labeling, and is now ready to enter the market with a modification of one of its stock labeling machines, adapted to handle labels with a pre-coated thermoplastic adhesive instead of liquid adhesives of the usual types.

The idea first loomed as a possibility back in 1936. By 1939 the principle had been developed to the point where a manufacturer of sheets, pillow cases, etc., was able to apply, by machine, a "peelable label" to his products in regular commercial production. Labels applied by this method provided the necessary identity for the shopper, but could be easily removed without leaving the residue which characterized the ordinary adhesive.

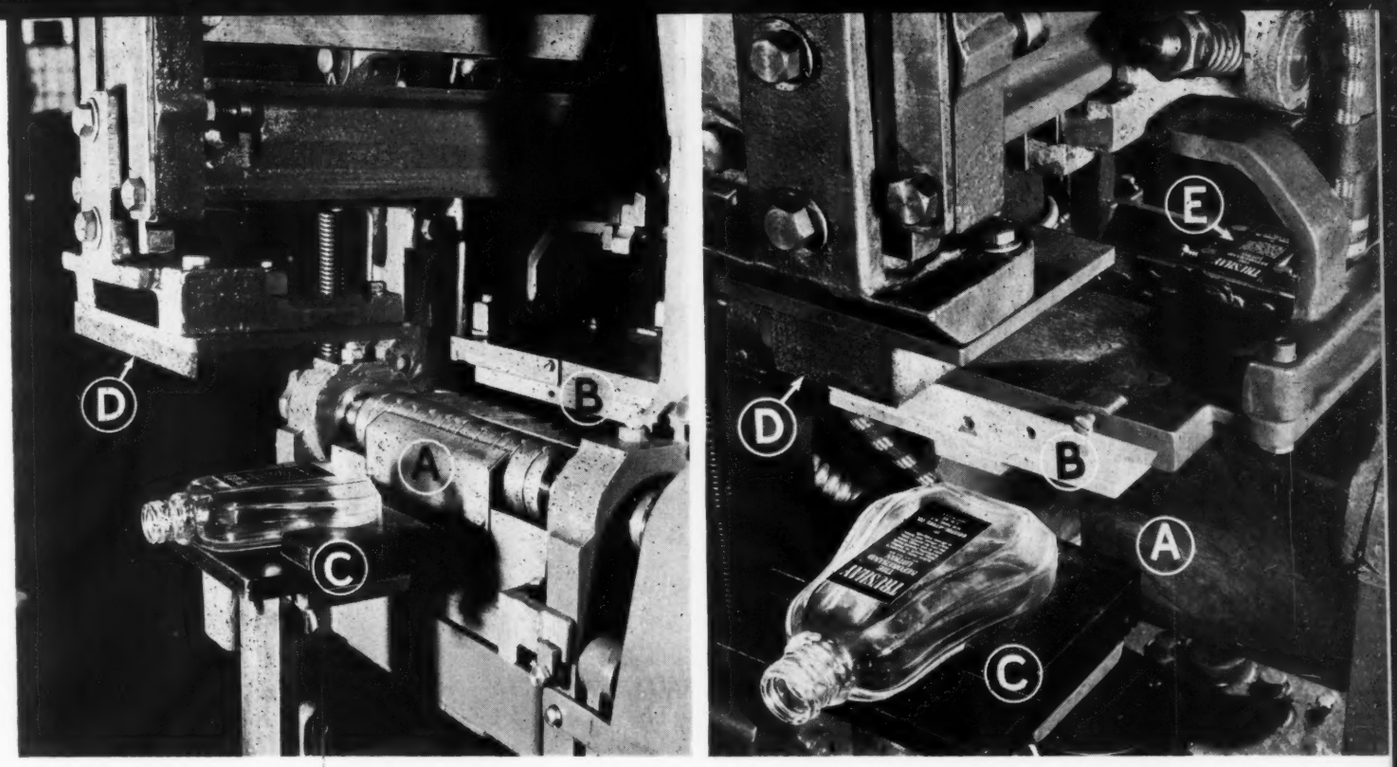
Labeling machine (rear view), as modified to handle thermoplastic labels—view is very little different from stock model made to handle liquid adhesive. (A) Label stack. (B) Suction mouthpiece which picks labels from stack.



These earlier applications utilized adhesives with a latex base, and when the war came along the developments were naturally halted. Very soon after the war ended, however, the study and experimentation were resumed by the New Jersey Machine Corp., this time their chief objective being bottle labeling. This involves two problems, one being that of the machine, the other the characteristics of the adhesive. The stock model of their labeling machine was of course made to apply labels with a liquid glue. A vacuum device or "suction mouthpiece" picks up a label from the hopper or stack, passes it over the glue roll to coat it with adhesive, and applies it to the face of the bottle, whereupon the "pressure pad" of sponge rubber comes down to smooth the face of the label. Some of the parts needed for this liquid gluing operation—glue pot, glue roll, roll scraper, glue roll drive and pick-off bar—are all unnecessary for dry or thermoplastic labeling, and have been removed. The only addition consists of the heating element by means of which the vacuum plate or suction mouthpiece is heated to the temperature necessary to activate the thermoplastic adhesive. This vacuum device—except for the addition of the electric heating coil and thermostatic control—remains exactly as before. In the brief instant during which this plate moves from the label stack to the bottle rest, sufficient heat is transferred through the label to activate the thermoplastic so that it will adhere.

The mechanical success of this modified machine is reasonably assured, but the success of dry labeling depends almost entirely on the characteristics of the thermoplastic coating used. As an approach to this part of the problem, the New Jersey Machine people formulated a set of specifications and properties, which were imperative, and then put the problem up to adhesive manufacturers, paper makers and converters. They insisted that the thermoplastic substance sought should have these characteristics:

1. It must adhere to cold glass.
2. It must not become active below 150 deg. F.
3. Complete activation must take place below 250 deg. F.
4. It must have a "time delay" characteristic.
5. Coating must not interfere with good printing qualities—
   (a) It must present a uniform surface.
   (b) It must be non-blocking.
   (c) It must be non-curling.



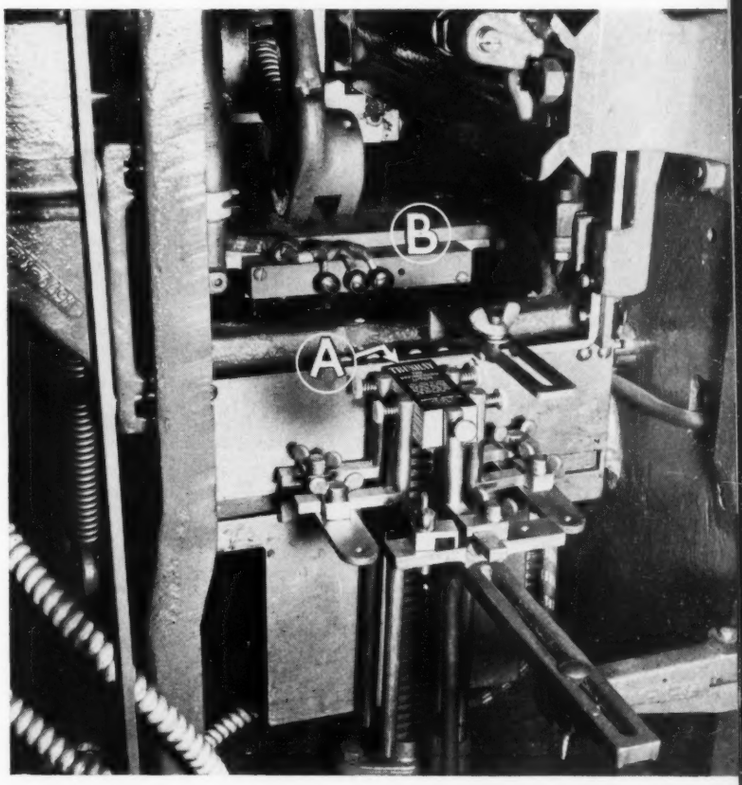
(Left) Close-up of a conventional labeler showing (A) glue roll and glue pot assembly; (B) suction mouthpiece returning to label stack; (C) bottle in "rest" on which label had just been placed; (D) pressure pad, about to descend, to smooth surface of label on bottle. (Right) Close-up of the same machine as modified to handle thermoplastic labels. Note (A) glue roll and glue pot assembly have been removed; (B) suction mouthpiece is unchanged as is bottle rest (C) and pressure pad (D). Note label stack in the background (E).

The adhesive companies and converters responded to the challenge, and at least one of them has produced a thermoplastic coating that meets all these requirements. For obvious reasons, the formulation is not being made public, pending the completion of patent protection measures; it can be said, however, that the material is produced from a combination of thermoplastic resins adjusted for use on this equipment.

In one respect—the "time delay" characteristic—the adhesive exceeds the requirement by so wide a margin that it promises other possibilities for the future. After being activated, so it is claimed, the coating will remain active for eight hours. This is in marked contrast with some other coatings used as adhesives in packaging. These usually have been based on the melt-and-freeze behavior characteristic; that is, adhesion would take place as long as the heat was present; when the heat was withdrawn, the adhesive would resume its solid state, with no adhesiveness whatever. One needs but to recall the action of such coatings as microcrystalline wax to realize exactly what this means.

Printing of the labels is done on the reverse side from the coating. While the quantities used so far have not been large, the runs have been sufficient to demonstrate satisfactory printing qualities. The coated surface has the texture and feel of an offset stock, and the printing surface apparently has no irregularities.

One thing has been discovered: labels printed on this stock cannot be lacquered, because lacquer requires too high a temperature for (*Continued on page 170*)



Close-up (rear-view) of the modified machine showing (A) label stack; (B) suction mouthpiece, wired for electric heat that activates the thermoplastic coated labels. Note the absence of the glue roll assembly which was removed from the space just below the suction mouthpiece.

POLYETHYLENE

1

1—*Polythene film is extruded in continuous tubes up to 36 in. wide and may be made into bags in this form or slit to form a single sheet. Made in gauges as low as 0.001 in., it has many advantages and promises to be competitive with principal packaging films now in use. The tubing shown was extruded by Visking Corp. of Chicago.*

2

2—*Showing transparency of present commercial polythene film. Further development is expected to improve transparency.*

...a new plastic and a new material *for packaging*

*by Dr. J. W. Shackleton**

Just prior to the outbreak of the recent war in Europe a new plastic, first made in the laboratories of Imperial Chemical Industries, Ltd., was being developed on a commercial scale in England. This plastic was a polymer of ethylene, which is a gas derived from petroleum, ethyl alcohol or coke-oven gases and well known in numerous and diversified industries.

Not long afterward, Du Pont undertook the further development and improvement of the plastic, known by the chemical name, polyethylene, or by the abbreviated name, polythene. During the war, because of the outstanding electrical properties of the plastic, polythene in this country was reserved for the armed services, principally for the manufacture of electrical insulation for high-frequency (radar) cables and as a dielectric for long-range field-communication wires.

A new medium for packaging

Now this versatile plastic has begun to attract the attention of the packaging industry and substantial quantities are already being used in various packaging and closure applications.

The properties of polythene, when first recognized, indicated immediately most of these uses, and these same unusual characteristics point toward other outlets just as promising. It should be admirably adaptable for wrappings of many types in the form of unsupported film; as molded caps and containers; as liners for caps and containers; as a coating for many types of sheeting; as an ingredient in coating materials and adhesives; and for many other uses.

Polythene may eventually be produced in a number of grades, differing mainly in average molecular weight. The properties of these varieties will differ somewhat as the molecular constitution varies. Polythene has been defined as those polymers of ethylene which are suitable for use as plastics. The present single grade in large commercial production has a molecular weight of about 18,000–20,000.

In addition to molecular variations in the polymer itself, significant modification may be accomplished by blending other materials with polythene. Several such compounds are already being manufactured commercially. One of these in film form is slightly more flexible and elastic than the pure resin; another is somewhat more transparent in thin sheets. A wide range of attractive colors can be obtained, both pastel and dark.

General description

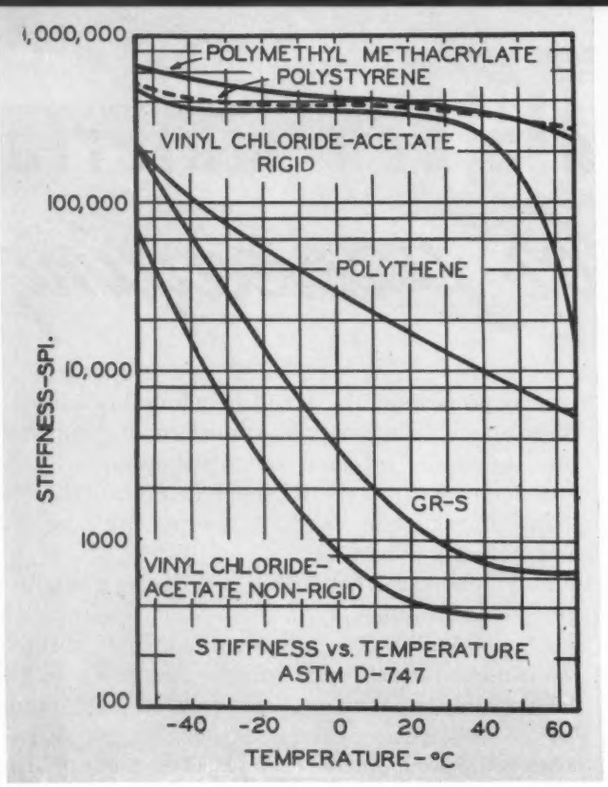
Polythene is a waxy white solid, translucent and thermoplastic. In the form of thin film (e.g., 0.001–0.010

* Technical Service Division, Plastics Dept., E. I. du Pont de Nemours & Co., Inc., Arlington, N. J.

3—*Molded polythene closures, both the plug and threaded type, have been adopted by one distiller. Slightly flexible, the closures form a tight seal and because of the material's inertness and taste-freedom it is expected that no liner or spot will be required.* 4—*A close-up of two types of polythene closures which are now in commercial production. These were closures molded by the Lumilite Corp. of Pawling, N. Y.*

3

4



5

5—*Stiffness-temperature performance of polythene compared with other plastics. By judicious compounding and product design, either rigid or flexible articles can be made.*

in.) it is transparent, especially when properly processed to attain this quality. It has a slightly waxy feel, but it is not at all tacky and shows no tendency to "block" even at temperatures well above those encountered in storage.

Uncompounded polythene is completely non-toxic, and entirely free from taste and odor. This would be expected, since chemically the resin is related to paraffin wax. Both belong to that class of inert chemical substances known as saturated, or paraffinic, hydrocarbons. It differs from paraffin chiefly in the magnitude and limits of its molecular weight. Polythene has a much higher average molecular weight, and the distribution of the molecular weight is much more closely controlled than in the case of paraffin. Thus, properties of the former are generally superior and more narrowly defined.

It must be emphasized that, although this close chemical relationship exists, polythene is distinctly not just another paraffin wax. It is a plastic with mechanical properties which cannot be attained with other paraffinic materials.

The long (500—2,000 units) chains of carbon atoms, with two hydrogen atoms attached to each carbon, which constitute molecules of polythene are arranged in substantial regularity, as can be shown by X-ray studies. The "crystallites" thus formed occur in more or less well-defined clusters which have been called "spherulites."

If tensile stress of the order of 1,600 psi. is applied to a polythene filament or ribbon, the clusters of crystallites become oriented longitudinally in the direction of the stress and, just as the fibres of a rope contribute to the longitudinal strength of the rope, these oriented and elongated molecular clusters develop unusually high strength in the plastic.

Moistureproofness

The water absorption of polythene is negligible. Measured in accordance with the A.S.T.M. method (D570–42) it is generally reported as 0.005%. Thus, polythene is less sensitive to water than other varieties of moistureproof film.

Polythene has an extremely low rate of transmission of water vapor. Depending upon the method of production of the films, values of 0.7 to 1.1 g./100 sq. in./24 hrs. for 1-mil film are reported. An inverse relationship exists between the thickness of the polythene film and the water-vapor transmission. Two-mil film has a water-vapor transmission rate of 0.3 gram/100 sq. in./24 hrs. These values are not appreciably altered when the film is subjected to sealing, creasing, crumpling, or other mechanical action. The transmission of water vapor is practically the same whether the film is in contact with water or not. In general, it is not affected by the action of the product wrapped.

Sea water and salt spray, which are so disastrously corrosive toward many other materials, have no effect upon polythene. Advantage is being taken of the unusual resistance of polythene to moisture and to chemicals as a protection against electrolysis in the coating of exteriors of pipes, cables and other subjects which are to be submerged in brackish water or soils of a moist and corrosive nature.

Chemical resistance

Polythene is not dissolved by any known solvent at room temperature. Only a very few have any noticeable effect upon it.

It is completely inert to the corrosive action of food chemicals. It is not attacked by concentrated mineral acids, including hydrofluoric, nor by caustic solutions. It is particularly resistant to inorganic chemicals. Its resistance to oxidizing and reducing agents in general is remarkable. Immersion for three months in concentrated nitric acid results in a decrease in tensile strength and elongation, but otherwise the plastic does not appear to be harmed.

At elevated temperatures polythene is very resistant to chromic acid, to hydrochloric acid in all concentrations and to caustic solutions. Concentrated nitric or sulphuric acid at 100 deg. C. will oxidize and char the resin.

Acetic acid does not affect polythene, but the plastic appears to be somewhat permeable to this acid. It has been observed that certain essential oils will pass through polythene films. For any proposed packaging application, it is suggested that polythene be tested for permeability of gases, vapors, odors and flavors. For those applications where polythene is found to be permeable, combinations of polythene with other films should be considered.

At room temperature the resistance of polythene to

all organic materials may be rated as "excellent" or "good." Only the chlorinated hydrocarbons, some of the parent hydrocarbons, a few esters and certain oils have any effect; these cause a slight swelling on three months' immersion.

At about 70 deg. C. (158 deg. F.) there is a sharp increase in the solubility of polythene in xylene. Similar phenomena are observed with other hydrocarbon and chlorinated hydrocarbon solvents.

The extraordinary chemical resistance of polythene has made it useful as a gasketing material and as a lining for chemical tanks and equipment. The electroplating industry is finding polythene useful for coating racks and other accessories, including tank walls.

Several large chemical concerns are testing polythene film, molded containers and the like for packaging corrosive chemical products and report good results.

Low density

Polythene is probably the lightest in weight of all the commercial plastics. Its specific gravity is 0.92; thus it will float on water. The bulk density of cube-cut polythene molding or extrusion powder is 27 lbs./cu. ft.

The area factor of polythene film 0.001 in. thick is 30,000 sq. in./lb. Obviously with respect to coverage, shipping costs and cost of molded product, this low density is of considerable significance.

Flexibility

Even in the absence of plasticizer, polythene is flexible and tough to below −70 deg. F. In thin sections it does not have the limp, rubbery qualities of most of the synthetic rubbers and nonrigid plastics. In heavy sections the plastic has a considerable degree of rigidity.

The curve shown in Fig. 5 indicates the new and interesting possibilities offered by polythene for development of packaging media. In uncompounded form, it offers a different modulus range than many of the other synthetics. By judicious compounding and product design either flexible or rigid articles are attainable.

Freedom from plasticizer effects

The usually favorable properties of polythene are not dependent upon plasticization of the resin with other materials. Many plastics suffer the disadvantage of requiring plasticizers, which are generally liquids and have an appreciable tendency to exude or be extracted from thin films, thus leaving the film stiffer and more brittle. Also plasticizers may tend to migrate and contaminate materials with which they come in contact. This lack of the need of plasticizer is obviously advantageous. For some special purposes polythene film may be "softened" by the addition of compatible solid resins.

Service at extreme temperatures

If a packaging film possesses good qualities such as low water-vapor transmission and yet shatters or crumbles when exposed to severe winter conditions, its utility is obviously limited. At low temperatures, unplasticized polythene not only is flexible but possesses extraordinary impact strength. This is of interest to designers of packages which are to be subjected to low temperatures in service or which must be shipped to cold climates. Packaging of frozen foods is immediately suggested.

At continuous temperatures of 120 deg. F. and above, the leaching and exudation of plasticizers is accelerated. Here again the advantages of the absence of a plasticizer are apparent. Polythene, with no plasticizer, does not become brittle under such conditions.

Polythene is remarkably form-stable, in the absence of load, up to temperatures approaching its softening point, which is in the vicinity of 220 deg. F. A safe service temperature for low loads is about 180 deg. F. Food packaging operations at 200 deg. F. have been carried out.

Molded samples have actually withstood boiling water, but sterilization by boiling is not generally recommended.

Compared with films of other plastics, polythene has excellent weathering characteristics. Several hundred hours of exposure to direct sunlight is required to cause embrittlement of polythene film. Certain antioxidants have been found which further improve its outdoor aging characteristics.

Polythene is not easily ignited, and when ignited burns slowly. The burning rate, as determined by A.S.T.M. method (D 635–44), is 1 in. per minute.

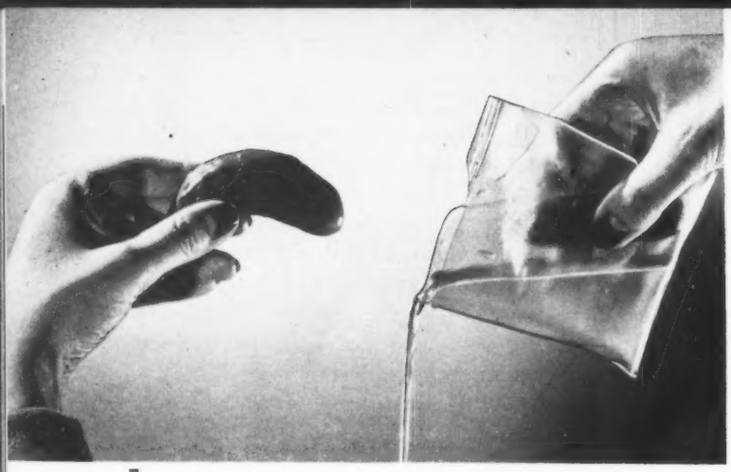
Film strength

Polythene is probably the toughest of the plastics which can be made by polymerization of unsaturated aliphatic hydrocarbons of the ethylene series (the alkenes). Blending it with paraffin wax will increase the strength and toughness of the latter in paper coatings.

In the form of unsupported film, extruded as continuous tubing, cut to length and heat-sealed at one end, large quantities of polythene were used by the U. S. Marines and the Army's amphibious landing forces as rifle covers. The strength of the film, its resistance to

6—Polythene is among the most moistureproof of all plastic films, suggesting its use as a bag-in-box type of package for all types of either moist or liquid products.

PHOTOS 6 AND 7, COURTESY VISKING CORP.



7

7—Because it contains no plasticizer, polythene film is completely taste-free and odor-free. It can be used, for example, as a moistureproof, heat-sealed envelope for packaging, among other things, pickles in brine.

tear, its imperviousness to water and retention of toughness at low temperature made it valuable for this purpose.

Although it can be marked with the fingernail, polythene has sufficient abrasion-resistance for most packaging purposes. As mentioned previously, it has good tear resistance and is not notch-sensitive. A hole pierced in a polythene film will not tend to "run." The edges of the hole will be found to be as little susceptible to tearing and extending farther as is the edge of the sheet.

Forms available and uses

When polythene is cut to the proper granular size, the plastic may be molded or extruded, to yield a large variety of shapes, such as sheets, tubes and rods of various dimensions, and an infinite number of custom-designed articles.

Polythene in the form of extruded sheets and thin-walled tubing has been used for packaging fresh shrimp, frozen fruits and vegetables. It is being considered for use with meat and meat products, dairy products, etc.

Liners for bottles and carboys which contain corrosive liquids have been stamped from sheeting or molded to the proper shape and size. Also complete containers have been molded of polythene.

Molded bottle caps of screw-on and snap-on types as well as decorative bottle stoppers have been molded from polythene. It has been proved that polythene bottle caps will function without benefit of a liner or spot. Exhaustive tests and experimental designs are being studied in connection with liquor bottle closures. One distiller has recently placed large commercial orders for molded polythene closures without liners.

It has been suggested that polythene film be used as a liner for bags to prevent lint contamination, and as a liner for fibre drums to permit the shipment of liquids and moist or corrosive materials. These and other developments are being investigated.

Extruded tubing cut to length and heat-sealed at one end is now sold commercially for household purposes. For example, it is excellent for keeping fresh such items as vegetables and meats when they are stored in the refrigerator. Covers for the display and protection of merchandise of many types are also produced. Experiments on the prepackaging of fresh fruits and vegetables in polythene films are being continued.

In England, polythene in combination with other films has been used to package medicinals. Mepacrine, an anti-malarial drug, in tablet form was heat-sealed between ribbons of polythene to provide individually packed doses which could be torn from a strip containing a week's supply.* Other medicinal packaging also is being studied here and in England.

Molding and extrusion

Standard injection- and compression-molding machines can be used to manufacture polythene articles. Polythene flows easily and sound moldings are produced by ordinary techniques.

At a temperature of about 80–100 deg. C. a marked transition occurs as polythene is heated or cooled. Above this temperature the resin exists in an amorphous phase, but as cooling takes place and the transition range is reached crystallization ensues. Depending upon the rate of cooling, either the normal growth of crystals progresses or else the resin may be "frozen" or quenched to modify this crystal formation. In any event, polythene at room temperature consists of a mixture of some amorphous and some crystalline forms. The phenomenon may be demonstrated in the quenching of film to produce high transparency and somewhat greater flexibility.

The transition from an amorphous melt to a quasi-crystalline solid is accompanied by a marked dimensional change. Thus when polythene is molded a shrinkage occurs, for which compensation must be made. In compression molding, the powder is heated and compacted under low pressure, and cooling is started just before high pressure is applied. In injection molding, large gates and runners and an extended dwell under pressure produce good results. Once the plastic has been cooled below the transition point, it becomes rigid very rapidly and is form-stable while still quite warm.

In the extrusion process, shrinkage is of less consequence. However, in the extrusion of polythene over a wire or other core it has been found advantageous to cool the extruded material gradually, to prevent the formation of voids which may develop if the surface becomes rigid while the interior is still soft. This is accomplished by cooling first in hot water (ca. 160 deg. F.) and finally in water at room temperature.

Polythene is relatively fluid above its softening point as compared with other plastics which soften over a wide range and remain extremely viscous even as they approach their decomposition temperatures. In the molten state, and under the pressure of an extrusion screw, polythene flows (*Continued on page 166*)

* See "Polyethylene Film." MODERN PACKAGING Nov., 1945, p. 107.

Institute cancels International Show

Regular annual meeting to be in Chicago, Nov. 25-26

Following unsuccessful efforts to consolidate the Packaging Exposition of the American Management Assn. with the proposed International Packaging Show of the Packaging Institute, the latter organization has allowed its option on Grand Central Palace, New York, to lapse.

Arrangements were made by Joel Y. Lund, Lambert Pharmacal Co.'s vice-president and past-president of the Packaging Institute, with Henry J. Howlett, secretary of the AMA, as a result of which a group representative of both organizations held a lengthy session in New York last month.

Among those participating in the discussion were Mr. Howlett, Walton Lynch, president of the Packaging Institute and vice-president of the National Folding Box Co.; Charles A. Breskin, publisher of MODERN PACKAGING, who acted as moderator; William Bristol, Jr., vice-president, Bristol-Myers Co.; Alan S. Cole, chairman, Exhibitors' Committee, AMA; Albin P. Dearing, secretary, Packaging Institute; Frank Greenwall, president, National Starch Products; R. D. Handley, Sylvania Industrial Corp.; H. H. Leonard, president, American Machine & Foundry Co.; L. B. Steele, E. I. du Pont de Nemours & Co., Inc.

No progress in the direction of a merger was made, and those in a position to know feel that there is little prospect for a consolidation of the projects. The AMA show, it was pointed out, makes no attempt to reach the ultimate consumer, but functions as a meeting ground where the users of packaging materials and equipment can make contacts with the producers for the purpose of comparison and selection, and where the producers can exhibit their latest developments for the benefit and information of the direct prospects who actually purchase those products. The opposing point of view insists that such a trade show is incomplete because it makes no appeal to the consumer to arouse interest in packaged merchandise. But the direct beneficiaries of an exhibit aimed at consumer interest, it was contended, would be the producers of the products which the consuming public purchases, while the exhibitors of the type of exhibit conducted heretofore have only a remote interest in appealing to the ultimate consumer.

Following this meeting, the Packaging Institute polled the members of its Board of Directors to determine whether to carry out their plans, and the results were practically unanimous in favor of dropping them, at least for the present.

Merchandising program planned

The Institute will hold its eighth annual meeting at the Hotel Stevens, Chicago, on November 25th and 26th. According to plans reported by Mason Rogers, of the Dewey & Almy Chemical Co., chairman of the program committee, and approved by the Board of Directors of the Institute, some unusual features will characterize the meeting.

Of widest interest, probably, will be the inclusion of discussions bearing on merchandising, distribution and advertising. Those fields, says Mr. Rogers, have never been stressed in Packaging Institute meetings; but in the years just ahead those aspects of packaging and the movements of packaged goods will prove of vital importance to all the members.

British affiliation made

The Institute has announced an affiliation which holds the promise of a profitable international exchange of information with the packaging field in Great Britain. This will be accomplished through an arrangement made with the Printing and Allied Trades Assn. of London. The British group has a Packaging Division which maintains laboratories and library facilities supported in part at least by Government subsidy, while the Packaging Institute relies on its technical committees and advisory boards for research study. The groups are composed of individuals engaged in technical capacities with the various member companies representing both producers and users of packaging material. It is expected that there will be a regular distribution of British "Packaging Abstracts" among the members of Packaging Institute, with a reciprocal agreement about the distribution of American studies for the English organization.

Standards Committee set up

A new committee has been formed from among the members of the Institute. The work of this committee will parallel, to some extent, the work of the Technical Committee headed by Charles A. Southwick, Jr., but will be less technical and will cover more specifically such matters as standardization of container sizes, and unification of non-technical terminology, all in the direction of more simplified and more economical practices.

This will be a standing Committee on Standards and Trade Practices to be headed up by E. A. Throckmorton, president, Container Testing Laboratories, who thus assumes important roles in two packaging conference organizations. (See MODERN PACKAGING, July 1946, p. 152.) The committee appointed to serve with Mr. Throckmorton was drawn from three classifications of the Institute membership—production, supplies and equipment.

SOUP'S ON!
HEINZ SOUP KITCHEN
HEATED IN 1 MINUTE
CLAM CHOWDER • SPLIT PEA • VEGETABLE • VEGETABLE BEEF
OLD FASHIONED BEAN • GENUINE TURTLE • CREAM of MUSHROOM

1

1 Heinz all-metal post-war soup kitchen displays ten varieties in two racks offering the customer a wide choice in selecting his ready-to-serve bowl of soup. Since the kitchen is so constructed that three cans may be placed in each chute, with only one showing, the display can hold as many as 42 cans. At the top of the unit is an illuminated Kodachrome of a brimming bowl of vegetable soup while the bottom holds a hot cup, two timers and a rotary can opener. Available in two gleaming finishes, white and simulated hammered copper, the entire kitchen is only eight inches deep, 20 inches wide and 29 inches high, taking up very little backbar space. A stainless steel model is expected to be ready soon for deluxe installations. Display, Helmco, Inc., Chicago.

2

2 Miracle Adhesive is now being packaged for consumer use in $1^3/_4$-oz. tubes in a two-color carton with a four-sided design, with the front panel reproducing the tube itself. A folding carton holding two dozen small cartons opens into the counter unit shown. The cut-out of the cover opens into a silhouetted tube above the sell copy. In packaging the small cartons into the display, half are turned so that the face with the reproduction of the tube is up and the other half show the face bearing the name of the product. Designer, Guy W. Hodges, New York. Carton and display carton, E. J. Trum, Inc., Brooklyn.

3 Shampoo for baby that will not smart the eyes is the sales story as told by this small easel-mounted counter card for Yveline products manufactured by Cosmetic Arts Laboratories, Upper Montclair, N. J. A die cut-opening in the lower right-hand corner holds an actual jar of the cream shampoo. The delicate blue and rosy-red color scheme as well as the design of the display follow the pattern of the label. Design, Lester H. Kohs, New York. Printing, Beacon Press, New York.

3

4 A counter display which includes an acetate-boxed automatic blanket is being used by the automatic blanket division of the General Electric Co. in its latest promotion

AUTOMATIC BLANKET
GENERAL ELECTRIC
SLEEP LUXURY YOU'VE NEVER HAD BEFORE
Warmth without weight
The warmth you choose
Rest warm all over
Go to bed between warm sheets
Sleep all winter in summer-weight night clothes
THE BLANKET WITH A BRAIN
The Instalite control automatically guards your comfort
Find your own "just-right" warmth — and forget it
You sleep all night in the same snowy comfort, whether it freezes or thaws

4

DISPLAY GALLERY

plans. The box is held in the display at a slant directly under the full-color illustration of the model demonstrating the use of the blanket. The sides of the display open in such a manner that a shelf is provided at each side of the box for throwaways and other promotional literature. Acetate box, Duranol Products Inc., Brooklyn, N. Y.

5 A 4-color varnished folding display carton containing one dozen Pal Hollow Ground Stainless Steel Paring Knives, is one of the first new Pal cutlery items to reach the market. The large red apple being pared is dominant and the sales features of the knife are brought out by yellow lettering on the glossy black background. "Little Pal"—the trade character used by the company for its blades, appears in a new role of chef. Printing, Chopp Printing Specialties Inc., New York.

5

6 A crack merchandising plan built around a new, streamlined dispenser has been launched to promote the new Diamond Tint line. Meant for self-service in outlets such as the large chain and independent drug stores, super markets, department stores, community hardware and variety stores, the all-metal dispenser holds a three gross assortment of 33 fashion colors. The built-in color chart aids the customer in selecting the proper shade of dye without the aid of a sales clerk. Display, Arvey Corp., Jersey City, N. J.

6

7 Parker Quink and Park Square stationery combined their display efforts to produce this window piece to promote Colormates—a combination of softly colored stationery with Quink in hues to harmonize. Done in four-color, the central panel repeats the picture on the box of stationery while promoting the Parker product. Side pieces promote the unusual features of Quink and display the variety of colors available. By tieing the two products together the dealer has a better chance to make a double sale as well as to build up additional sales to stationery-conscious customers who buy both paper and Quink in a variety of colors. Display, Zipprodt, Inc., Chicago.

7

Copy on new label (left) stresses standing of the Lorillard name in tobacco field for close to two centuries. Old slogan, "The treasure of them all," has been transferred to back panel. Throughout, Old English lettering is used for Old Gold name and script lettering for the copy.

Actual sample of old and new Old Gold "twenties" cigarette cup labels reveal subtle design changes. Elimination of shadow lines, refinement of coin design, slight variations in copy and lettering give label cleaner, more modern appearance. Identity of product is maintained.

Something new . . . in Old Gold packaging

You may be a constant smoker of Old Gold cigarettes, but chances are that you haven't noticed changes in design of the "20's" package that have been quietly made in the last few months.

You may have noticed that the package is clean, bright and attractive, but you would almost have to lay the old label alongside the new—as we have done on these pages—to observe the specific changes in design, so subtly have they been made. Yet, seeing the two, you would have no hesitation in picking out the new as the cleaner and more desirable package label.

The change forms an invaluable study of the working out of a problem common to many big-volume packagers in fields so intensely competitive: how to clean up and modernize an outmoded design without impairing in the slightest the at-a-glance customer recognition—which on such items as cigarettes is a sales asset of incalculable value.

These were the out-of-date features which the P. Lorillard Co., Inc., decided, after long study, should be changed in the package for Old Golds—one of the five biggest-selling cigarettes:

1. The blurred appearance of the Old Gold name on the face of the package.
2. The cloudiness of the border lines at the top and bottom of the label.
3. The general outmoded appearance of lettering.
4. The indistinct appearance of the coin design.
5. The prominence of the well-worn slogan, "The treasure of them all."
6. The antedated appearance of the label as a whole.

This is how the objectives were achieved in redesigning the label:

Old Gold name: Notice how the elimination of the dark shadow line around the Old Gold name makes the lettering on the new label stand out clear and bright against the buff background. Size of the red lettering remains the same, but the strong contrast between the red and buff makes the name appear much bolder.

Border lines: Here, too, elimination of the dark shadow line which paralleled the red border lines at the top and the bottom of the package have the effect of clarifying the label. Hardly distinguishable is the very slight reduction in width of the red border lines.

Lettering: In each instance where the Old Gold name appears, Old English lettering is now used. This uniformity was not observed on the old label; Old English was used only on the front panel, while Roman lettering was used on the back and bottom panels.

Roman lettering for sell copy has been dropped. A very fine script is used throughout.

Only the word "cigarettes" has been retained in Roman lettering on the front and back panels and "Established 1760" on the left side-panel. In each case, however, the lettering is much smaller and more refined.

Even the printing of the required Internal Revenue Regulations on the right panel—the only wording that is not hand lettered—has been reduced in size.

Coin design: This has been reduced considerably in size. Yet, at the same time, the pattern of the coins is made much sharper and cleaner through the use of finer lines, giving the coins themselves a much more realistic appearance. Note also that the blue dot at the bottom of the coin design and the black shadows against the block of blue at the top, which impaired the clarity of the design on the old label, have been removed.

Slogan: The standing of the Lorillard company in the tobacco industry for close to two centuries is a matter of pride to the makers of Old Gold cigarettes. They felt that this fact should be brought more forcibly to the attention of their buyers. On the face of the package, directly below the coin design, is "Made by Lorillard, a famous name in tobacco for nearly 200 years."

The company felt that its well-worn slogan, "The treasure of them all," nevertheless still conveyed an appealing and appropriate sales message and should not be completely discarded. On the new label you will find the slogan judiciously placed on the back panel.

General appearance: Reduction in size of the coin design and in the lettering of the word "cigarettes" provides the label with a greater expanse of buff background. This contributes to the new label's uncluttered look and modern, up-to-date appearance.

The bottom border line of red has been raised slightly to provide an equal space of buff above the red line at the top and below the red line at the bottom. This

(*Page 139*)

Only change in copy on the Old Gold "twenties" carton is on the front panel. Here again the nearly 200-year standing of the Lorillard company is promoted. The red lettering against a white background has been retained.

provides the new Old Gold package with new symmetry.

The fine diminutive hand-lettered script which replaces the Roman lettering previously used for copy on the front and back panels does away with the heavy appearance of the old design.

Elimination of the dark shadow lines and the general reduction in size of all lettering adds to the clean, up-to-date, bright and attractive look of the new label.

Of paramount importance in redesigning the Old Gold "20's" label was the question of whether the general appearance of the old label should be retained or whether a completely new design should be adopted. The company concluded, after a great deal of study, that the recognition value attached to the old design and coloring was an asset that should not be completely discarded. Cigarette smokers have come to know the Old Gold label design. The company believed that its basic appearance compared favorably with labels of other cigarette brands. To discard a well-established and acceptable design, it was felt, would be a mistake.

The company's decision, however, was not a hasty one. Considerable discussion and thought preceded the determination to retain the general design of the old label. Several completely new designs and a number of variations of the old design were developed for consideration. New designs submitted all conveyed the theme of Early America, tobacco and old gold—drawings of clipper ships, Indians and a variety of shield and coin designs. Variations of the old design in some instances were almost indiscernible, while others were greater.

The same general design of the present label was used when the Lorillard company first started making Old Gold cigarettes some 20 years ago. At that time, however, bronze powder was used for coloring the coin design. Gold ink was substituted for the bronze powder in 1933, eliminating loose bronze and making for sharper printing detail. In 1942 buff ink replaced the gold and proved so effective that thought of a return to gold ink has been abandoned.

In addition to the cup label redesign, changes have also been made in the paperboard carton for Old Gold "20's." A slight variation in the die-cutting of the carton blanks eliminates fractions of an inch from tabs, sides and top, and there has been a revision of copy on the front panel of the carton which repeats changes made in the label copy.

The new carton measures only $^1/_{16}$ in. less in over-all width, $^1/_8$ in. less at the top panel (the piece which forms the tuck-in flap when the carton is set up) and $^3/_{16}$ in. less at the upper tabs, right and left, which extend from the back panel of the carton when set up. Considering the millions of cartons of Old Golds sold annually, this infinitesimal change is noteworthy.

Copy on the front panel of the paperboard carton has been revised to stress again, as on the label, the company's long-standing reputation. Replacing the slogan "Something new has been added!" is "A famous name in tobacco for nearly 200 years." This appears in two lines of hand-lettered script to the left of the panel. Directly below and to the right appears "P. Lorillard Company, Established 1760." This is the only change made in the carton copy; coloring of the old carton—red lettering against a white background—remains the same.

The new cartons have just been placed on the market. The new cup labels, however, were introduced at the beginning of the year. At first the new labels were used in conjunction with the old; it was not until last month that their exclusive use was adopted.

CREDITS: *Labels by Manz Corp., Chicago, Ill., and Woodward & Tiernan Printing Co., St. Louis, Mo. Cartons by National Folding Box Co., New Haven, Conn.; Robert Gair Co., Inc., New York; Consolidated Paper Co., Monroe, Mich.; Universal Folding Box Co., Inc., Hoboken, N. J.; Container Corp. of America, Chicago, Ill., and Continental Folding Paper Box Co., Inc., Richfield, N. J.*

Varnish prevents "blocking"

Shefford Cheeses, a product of Standard Brands, Inc., have recently appeared on the market in a colorfully designed family of packages.

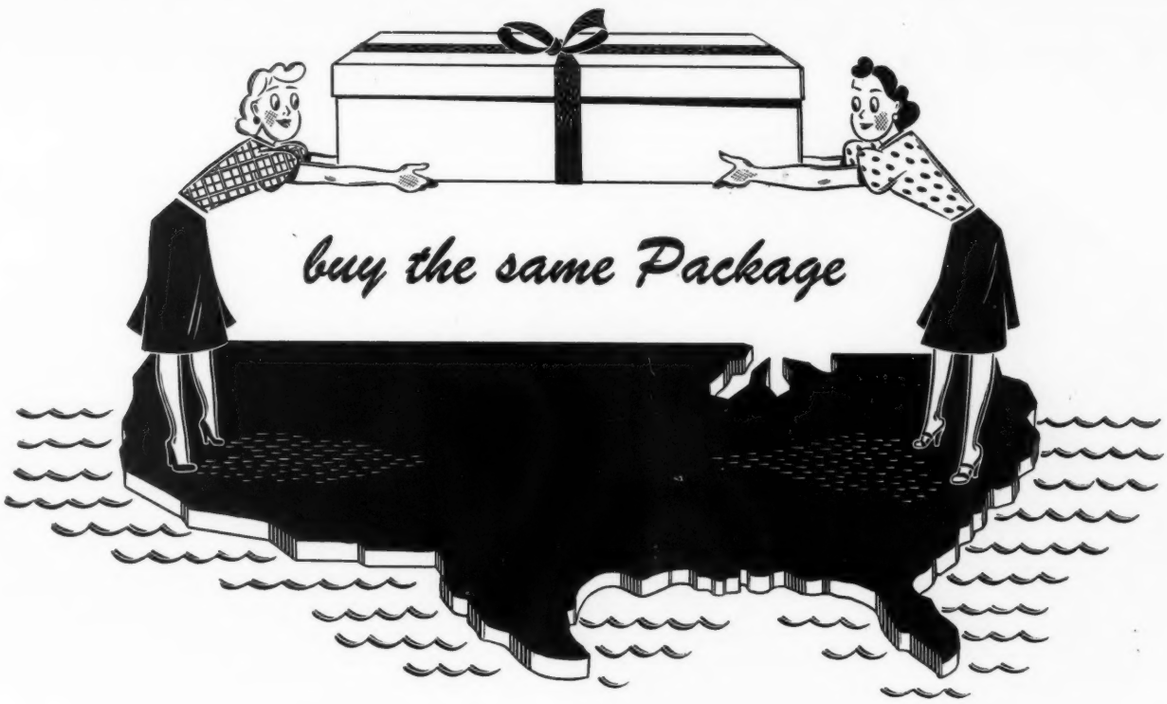
As these $^1/_2$ lb. packages are wrapped and packed while the process cheese is still hot, a perplexing problem was that of eliminating the tendency of the packages to stick together or "block."

This fault caused considerable damage to the packages. Inks pulled off the wrapper and destroyed the design and appearance. Slip sheets between layers of cartons did not altogether prevent the trouble.

The problem was solved by the use of a non-blocking varnish to protect the printing. Now the cheese packages can be packed without fear of blocking, slip sheets eliminated and an undamaged package placed before the consumer.

CREDIT: *Lithographed wrappers and non-blocking varnish developed by Milprint, Inc., Milwaukee, Wis.*

Mrs. Smith in New York and Mrs. Jones in San Francisco



Mrs. Smith in New York and Mrs. Jones in San Francisco as well as Mrs. Robinson in Chicago and Mrs. Doe in Dallas are all buying the same package. And this is true of thousands of other women in thousands of other United States cities.

To make sure that a mass merchandised product is packaged uniformly is no easy task. It involves planning and it involves production. F. N. Burt offers both to packages for mass markets. That is why many of America's leading packagers of drugs, cosmetics, tablets, pills, etc., utilize our automatically produced containers.

We produce small, round, oval, square, oblong setup boxes completely by machine. This means quantity production—speed production—economical production—*uniform* production. These are the four conditions which must be fulfilled in manufacturing packages for our customers. Our mounting millions of orders testify to the efficiency with which we meet our customers' needs.

Send for samples.

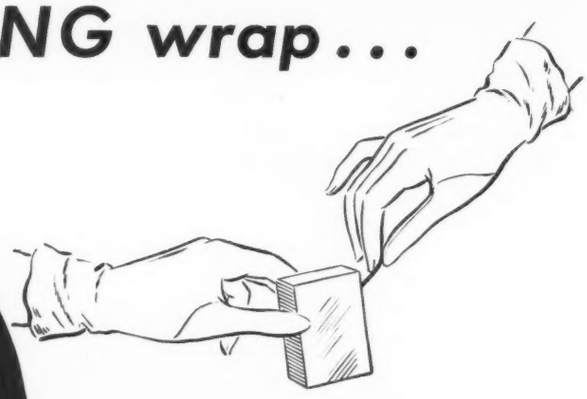
F. N. BURT COMPANY, INC.

500-540 Seneca Street, Buffalo, N. Y.

New York City • Philadelphia • Boston • St. Louis • Atlanta • Chicago • Cleveland Cincinnati • Los Angeles • New Orleans • Memphis • Minneapolis • Kansas City San Francisco, California • Newark, New Jersey

CANADIAN DIVISION:
Dominion Paper Box Company Ltd., 469-483 King St. W., Toronto 2, Canada

There's a real SALES ADVANTAGE in an EASY-OPENING wrap...



You know how exasperating a hard-to-open package can be. It's one of those little annoyances that can have a BIG effect on sales . . . And yet drugs, cosmetics, foods, etc. require a tight, firmly sealed wrap for complete product protection, as well as for attractive appearance.

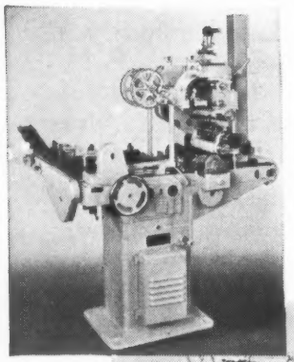
Our machines supply the answer to this problem by incorporating an easy-opening tape in the wrapper. A slight tug of the projecting end of the tape neatly opens the tightly sealed wrapper.

This type of wrap has proved so welcome a convenience to the consumer that more and more manufacturers are adopting it. It's something to consider if you are seeking ways in which to give your package the edge on competition.

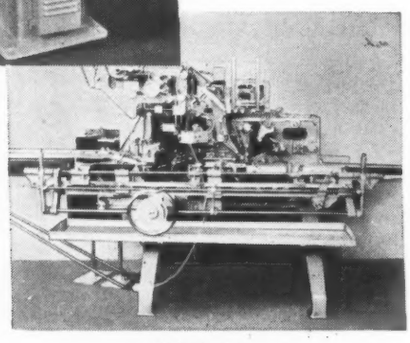
In many cases the wrap can be so designed that it will remain on the package after being opened by the tape. A cigarette package is an example. Also the Troll package illustrated here. In this case the laminated foil wrapper is sealed by strips of melted paraffin printed on the carton in the wrapping process.

We'll be glad to show you how an easy-opening tape could be added to your wrapping if you will send us a few samples of your package. We may also be able to suggest other ways of improving its sales appeal—for in serving package goods manufacturers for over 30 years we have gained wide experience in developing packaging innovations.

Why not avail yourself of our suggestions?



MODEL CM-2
Widely used for high-speed wrapping of small size packages in cellophane with easy-opening tape.



MODEL CA-2
Wraps such items as tape bandage, headache powders, etc. with easy-opening tape.

PACKAGE MACHINERY COMPANY
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Over a Quarter Billion Packages per day are wrapped on our Machines

Micro-organisms in paper

. . . their relation to the sterility of packaging materials

*by John W. Appling**

The purpose of this article is to acquaint the packaging industry with the significance of micro-organisms, particularly bacteria, which may be present in or on paper. It is well established that many grades of paper actually do contain bacteria and fungi. A sanitary paper, however, is one which is free from any bacteria or fungi whose presence might constitute a hazard to public health. The term paper is used in this article to mean every thickness of paper, from light-weight grades to thick boards, used by the packaging industry. Since paper is used for a large variety of sanitary purposes, ranging from personal hygiene to packaging foods and pharmaceuticals, it becomes a matter of paramount importance to know whether or not bacteria and fungi in paper actually constitute a hazard to public health.

According to Professor G. W. Anderson (1),[1] Head of the Dept. of Preventive Medicine and Public Health at the University of Minnesota, sanitation is established by giving proper attention to each of two factors: first, a specific disease prevention factor and, second, an esthetic factor. Each of these is equally important to make a product or process a sanitary one.

The author will discuss in this article the manufacture of paper from a sanitary viewpoint for the purpose of emphasizing the complete lack of sanitary significance of the micro-organisms in and on paper as it is manufactured for use in food packaging and personal hygiene.

Lethal factors in pulp and papermaking

In order to manufacture paper, the raw materials themselves and the sheets being made are subjected to a variety of operations, some of which are exceedingly destructive (or lethal) to all forms of life including bacteria. The chemical pulping of wood involves the use of chemical agents and heat which, in addition to destroying the cell structure of wood tissue and liberating the cellulose, destroys all forms of life. The crude hot pulp is sterile—that is, free from all living cells. The preparation of groundwood pulp is accompanied by the application of sufficient heat to destroy all except heat-resistant living cells.

The washing of chemical pulps and the addition of water to groundwood pulp as it leaves the grinders are operations which may introduce bacteria as well as fungi into the respective pulps. The extent of this contamination of the sterilized pulps will depend upon the microbial content of the wash water. Recirculated waters are used extensively as wash waters and these often contain enormous numbers of bacteria. The fresh water supply may also be a source of contamination for sterilized pulps. In both instances, however, the microbial content can be held at an extremely low level by the judicious application of effective disinfectants.

Unbleached chemical pulps are often bleached by chlorine (or hypochlorites) to increase their brightness and in some instances to destroy undesirable odors. This operation is an extremely lethal one which again sterilizes the pulp. The washing operation to remove excess chlorine and soluble chlorination products may be used to an advantage in maintaining a low microbial content for the pulp. Again, the judicious application of effective disinfectants to the wash water is successful for this purpose.

As the wet sheet enters the drier section of the paper machine, it is likely to have a high bacterial content. The lethal effect of the drier rolls has been thoroughly investigated by several workers. Tanner, Wheaton

This contributed article is an excellent scientific résumé of one phase of a currently controversial subject. The author reaches the conclusion that any bacteria which may survive the paper-making operation are of little or no significance from a sanitary point of view. It is hoped that this discussion will be followed up by someone in the paper-using trades with data on use requirements and allowable micro-organisms.

* The Institute of Paper Chemistry, Appleton, Wis.

[1] Figures in parentheses refer to "References" appended.

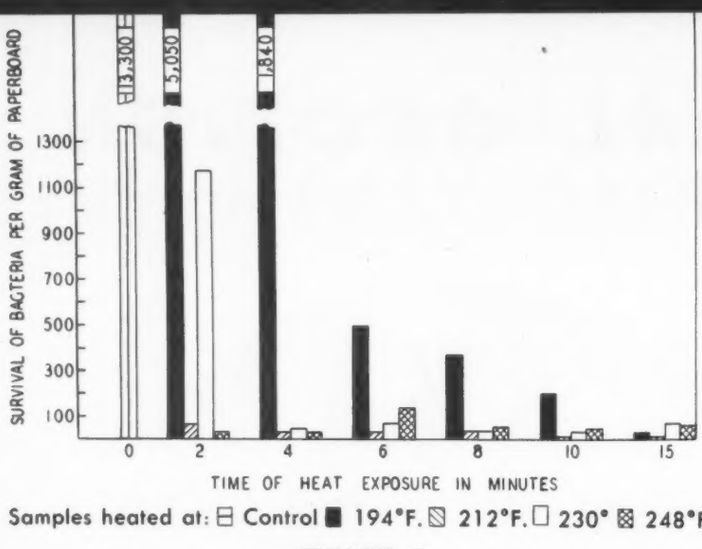


FIGURE - 1

The above illustration shows the survival of Bacillus megatherium *(normal culture) per gram of paperboard.*

and Ball (2) sprayed the wet web on a commercial paper machine with two species of non-spore-forming and one species of spore-forming bacteria. Only the latter was detected in the paper at the dry end of the machine. Two years later Appling and Shema (3) reported a series of extensive experiments which had been conducted over a period of three years to determine more precisely those conditions under which the drier section would destroy bacteria. When the wet web of an experimental Fourdrinier machine was inoculated with *Escherichia coli*, *Serratia marcescens*, *Staphylococcus aureus* and *Aerobacter aerogenes*, none of these four non-spore-forming species survived the drier section. However, when *Bacillus mycoides* (a spore-forming species) was used, either singly or in mixtures (4) containing several of the above non-spore-forming species, large numbers of the spore-forming species survived the drier section.

Having demonstrated that many spore-forming species of bacteria survive the moist heat of the drier section, the authors made numerous determinations of the heat resistance of several spore-forming species of bacteria. The experiments were made *in vitro* and in paperboard. The results showed: (*a*) that *Bacillus mycoides* and *Bacillus megatherium* (two spore-forming species commonly found in mill systems and in paper products) survived much longer exposure periods to moist heat in paperboard than *in vitro;* (*b*) that the thermal resistance of these same species was often too great for one to expect their destruction by the moist heat of the drier section; (*c*) that the thermal resistance of these two species was too great to obtain paperboard having a low bacterial count if relatively large numbers of them were present in the wet web; (*d*) that the thermal resistance of a given species of bacteria isolated from paperboard was much greater than that of another strain of the same species which had not been isolated from paperboard. Figs. 1 and 2 are included from the article by Appling and Shema (3) to illustrate the above statements.

The studies reported above leave no doubt concerning the lethal effect of drier rolls upon spore-forming and non-spore-forming bacteria. The latter are destroyed completely, whereas the spore-forming species are only greatly reduced in numbers. From the sanitary angle, this fact has great significance. In the case of the drier rolls, the killing of the non-spore-forming bacteria means that pathogenic (disease-producing) bacteria would not survive the drier rolls since practically all pathogenic bacteria are also non-spore-forming. A few anaerobic spore-forming pathogenic bacteria are known but these have not been found in paper.

The effect of waste paper upon the bacterial content of boards has been studied also (3). It was found in a certain board mill that large numbers of bacteria were present in the top and bottom liners when these had been made from waste paper. The drier rolls did not have sufficient lethal effect to sterilize highly contaminated stock, although it had been heated by direct contact with the rolls. The filler portion in many grades of board is made from waste paper stock. The sanitary significance of this fact appears to rest largely on the esthetic side. Although the survival of large numbers of spore-forming bacteria in such grades of board has been confirmed by many workers, no pathogenic bacteria have been found.

The lethal effect of chemical pulping, of bleaching and of the moist heat of the drier section of the paper machine are the principal lethal factors which are inherent to papermaking. In addition to these inherent factors, there are several factors (4) which, although not absolutely necessary in the papermaking operations, nevertheless can be used effectively to maintain bacteriological control in the mill system. Briefly, these factors are: (*a*) good housekeeping, (*b*) chlorination (with or without ammonia) of untreated fresh water, (*c*) chlorination (with or without ammonia) of recirculated white water, and (*d*) the addition of suitable chemical disinfectants at the beater or elsewhere.

Microbial content of paper leaving paper machines

The combined lethal effect of the seven factors just discussed is known to vary not only from mill to mill but also from one grade of paper to another within the same mill. This variation can be traced to the raw materials used, to the mill equipment, to the degree of bacteriological control exercised within the mill and (in some cases) to the season of the year.

The present author reported and discussed (4) the data obtained during 1940–1942 in 12 different mills for which bacteriological surveys were made. Although some lactose-fermenting bacteria were found in paperboards made principally from waste paper, in no case were coliform bacteria[2] found. The total bacterial content of boards made principally from waste paper varied from a few thousand to hundreds of thousands per gram. On the other hand, papers and boards

[2] Coliform bacteria are rod-shaped non-spore-forming bacteria which either are *Escherichia coli* (inhabitant of the human intestines) or resemble this species very closely. Coliform bacteria are important as indicators of water pollution.

made from chemical and mechanical pulps (so-called virgin pulps) had a much lower bacterial content—in many cases, they were practically sterile. In the same publication (4) the author presented monthly arithmetic averages for bacterial counts from 2,183 samples of paperboard made by three different mills. One of the mills (an Eastern one) submitted data for two calipers of board, 0.017 in. and 0.030 in. The thicker board had a lower count from month to month (except for August) than the other one. In both instances the bacterial content was distinctly higher during the summer than the remainder of the year.

Another mill (also an Eastern one) submitted data for board samples which varied in caliper from 0.0125 to 0.018 in. In contrast to the data from the first mill, the average counts were considerably higher during winter than the rest of the year (see Mill B, Fig. 3).

The data for boards having a caliper of 0.017 in. made by Mill A during 1942–1943 are given in Fig. 4. It is apparent that average counts were higher in 1942 than in 1943. Rigid bacteriological control was exercised in each of the three mills and yet unexplicable variations in bacterial content occurred in two of the three mills. It is believed that such data as the above can be replicated in any other mill which makes sanitary grades of paper.

The identity of the micro-organisms in paper has been investigated by several bacteriologists. Sanborn and Gillotte (5) reported that approximately 90% of the surviving micro-organisms in paper belonged to the genera *Bacillus* and *Micrococcus* (the former being spore-formers and the latter non-spore-formers). They also found species belonging to the genera *Sarcina* and *Actinomyces* in addition to some unidentified non-spore-forming bacteria and filamentous fungi. Smith (7) reported nine species of *Bacillus* (spore-forming bacteria) and one of *Actinomyces*. One interesting species found was *Bacillus macerans*, a lactose-fermenting species. Tanner (6) reported the microflora of finished paper to be composed of harmless saprophytic aerobic spore-forming bacteria which had no sanitary significance. Heist and Sanborn (8) examined samples of pulp and paperboard from 7 mills for thermophilic bacteria, of which they found both obligate and facultative types. The majority of these thermophiles were species commonly found in the soil, dust and air. None of them attacked cellulose.

Microbial content of paper leaving converting mills

It has been shown that paper leaving paper machines may be practically sterile or it may contain hundreds of thousands of aerobic spore-forming bacteria per gram, depending upon the mill and the grade of paper.

With the exception of a few cases, the effect of converting mill operations upon the microflora of paper has not been studied. The paper milk container is the most important exception because its microbial content has been studied extensively since 1936. Tanner (9) discussed the manufacture of paper milk containers from a bacteriological point of view. Using the rinse test as the criterion of sanitation, "nearly 8,000 containers of one type have been examined; 80% of these gave no colonies whatever. The 20% which were not sterile yielded generally an average of two colonies per bottle." The microflora consisted chiefly of aerobic spore-forming bacteria, a few white *Staphylococci*, and a few *Sarcinae*. Neither coliform bacteria nor any other gas-producing species of bacteria were found in the thousands of containers examined by the rinse test. The U. S. Public Health Service (10) recognized the paper milk container as satisfactory provided certain conditions were fulfilled; among these was one which specified that the bacterial content of the paperboard stock should not exceed 250 colonies per gram. Stark (11) in the 14th Annual Report to the N. Y. Assn. of Dairy and Milk Inspectors, stated that, although the bacterial count of the paperboard was a satisfactory measure of the conditions under which the board was manufactured, the rinse test was an equally satisfactory measure of storage and handling practices for paper milk containers. Hoy (12) in Great Britain found that 86% of the 1,654 pint-sized paper milk containers examined during a six-year period were virtually sterile and that 97% of them contained less than 200 colonies per container.

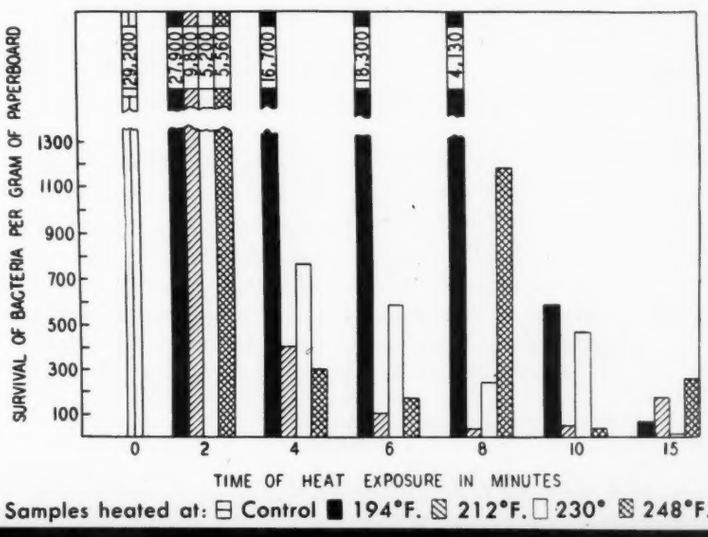
In addition to the bacteriological work on paper milk containers, some has been done on paper milk bottle caps. Rice (13) has done the most work along this line. He found that the bacterial content of bottle caps varied greatly and that this was dependent not only upon the board used to manufacture the caps but also upon the bacteriological quality of the tube containers used in packing the caps.

Although it may be presumed that there are opportunities for contamination of paper in the converting mills by handling and storage practices, evidence for this being a hazard to public health is nonexistent.

Sanitary significance of microflora in paper

According to several bacteriologists (5, 8), both non-spore-forming and spore-forming species of bac-

The graph below shows the survival of the Bacillus megatherium *(paperboard isolate) per gram of paperboard.*



(*Page 145*)

teria are found in finished paper. According to other bacteriologists (2, 3, 4, 6), non-spore-forming species neither survive the drier section of a paper machine nor are they found, other than adventitiously, in finished paper. Possibly this disagreement in reported data may be traced to a difference in grades of paper which were examined. The second group of bacteriologists referred to above were discussing food wrapping and packaging grades of paper. It is possible that the former group included all grades of paper in their studies of the microflora.

The importance of the above discussion becomes evident when it is remembered that pathogenic aerobic bacteria are almost entirely non-spore-forming. Overwhelming evidence has been presented (2, 3, 4, 6) for the destruction of non-spore-forming bacteria by the moist heat of the drier rolls. The sanitary significance of this fact from the standpoint of specific disease prevention cannot be overemphasized. If the survival of micro-organisms in paper is limited to aerobic spore-forming species, as the best evidence has shown, the finished paper must be free from pathogenic bacteria.

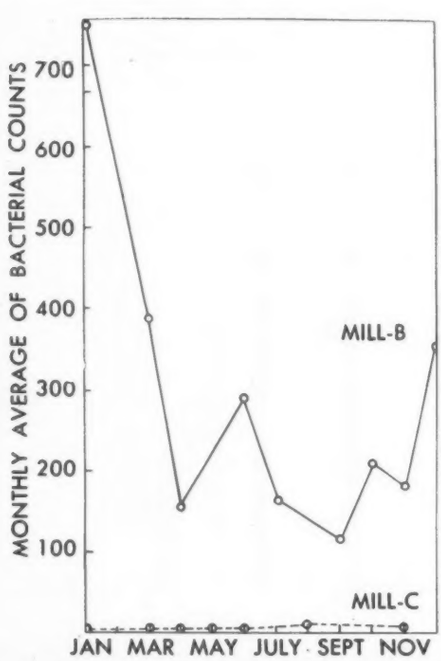
The absence of coliform bacteria from all grades of paper, in spite of their presence in many mill systems right up to the wet web entering the drier section, is important evidence for the absence of pathogenic bacteria from all grades of paper as they are produced. Coliform bacteria are the widely accepted criterion of the degree of sanitation of drinking water supplies (14, 15). The greater the concentration of coliform bacteria in a water sample, the greater the degree of pollution of the water. On the other hand, the absence of coliform bacteria from a water sample is interpreted as meaning the absence of pathogenic bacteria. The absence of coliform bacteria in all grades of paper, including those made principally from waste paper, is direct evidence for their destruction by the moist heat of the drier section and indirect evidence for the destruction of all non-spore-forming bacteria.

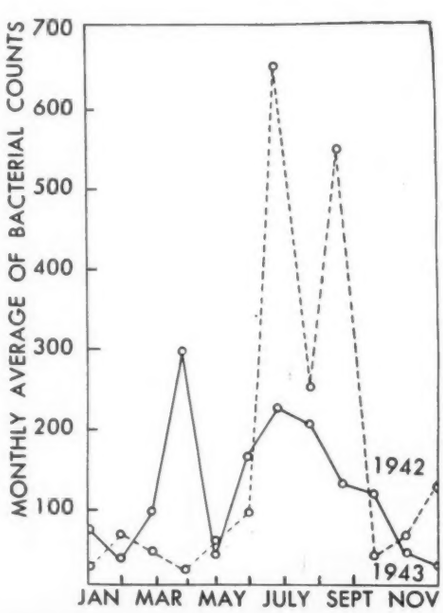
A third line of evidence to show that paper satisfies the specific disease prevention factor of sanitation is the excellent use record for sanitary papers. Baker (16) called attention to the fact that no case of a communicable disease has been traced to contamination of the paper or paperboard from which food containers had been made, although billions of such containers have been used. It has been implied that waste paper is unfit to be used in any food containers in any proportion whatsoever, and that the only sanitary grades of paper and paperboard are those which have been manufactured from so-called virgin stock—i.e., pulps not previously used for making paper. In sharp disagreement with these implications, it has been pointed out (17, 18) that for many years the folding box industry has produced packages for cakes, cookies, breakfast foods and other food products. Although 90% of the stock used to manufacture the boards used for such packages was secondary stock (waste paper), there has been no case of illness attributed to an unsanitary paper container. Finally, the excellent sanitary record of paper milk containers should be cited. Prucha and Tracy (19) have made a thorough study of three well-known types of paper milk containers. The results proved that the paper milk container was not only eminently practical but also sanitary.

The author has made no attempt to show that paper has a distinct esthetic value in sanitation. There is universal agreement among those who use paper for sanitary purposes that it qualifies in a unique manner along esthetic lines. Mere mention of the single service idea and its implications in sanitation should be sufficient to show the very high esthetic rating of paper for food packaging.

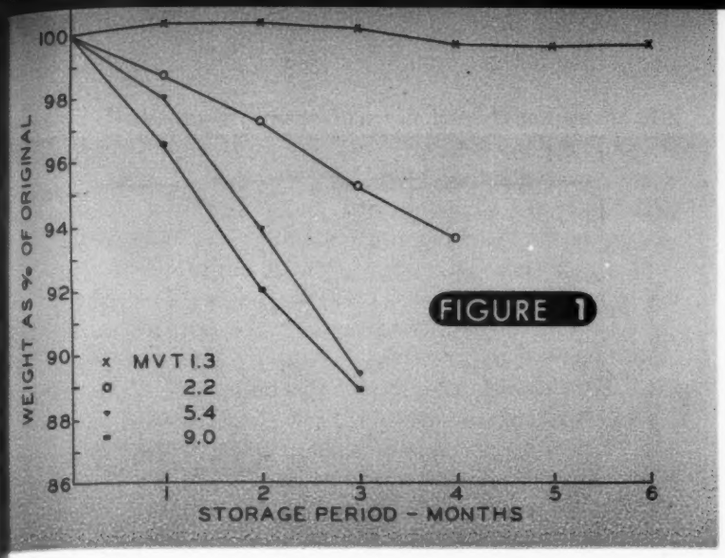
Conclusions

Papermaking has been discussed from a sanitary point of view. Chemical pulping of wood, to a lesser extent mechanical pulping of wood, and bleaching of pulps are effective means for sterilizing wood pulp. The wash waters used in (*Continued on page 172*)

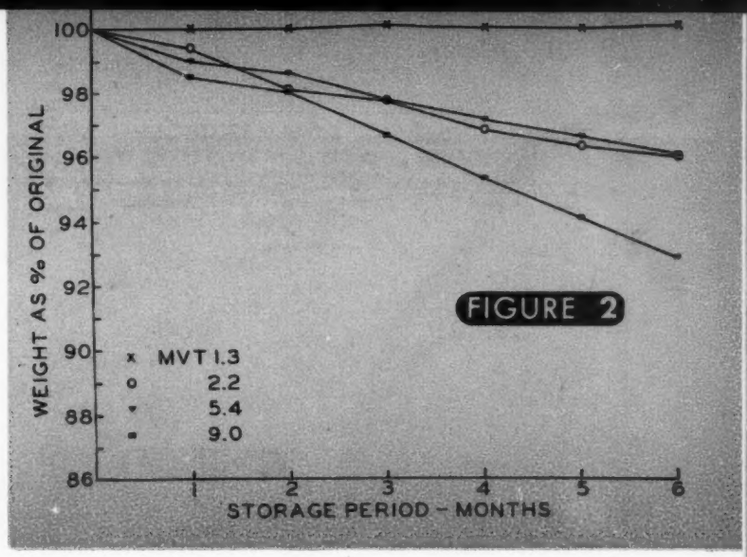




(Left) Variation of bacterial content of board made by Mills B and C. (Right) Variation in bacterial content of 0.017-in. board made by Mill A during 1942–43.



The relative protection from moisture loss in packaged ground meat when stored at 34 deg. F., protected by sheets with a WVT rate (TAPPI) ranging from 1.3 to 9.0.



The relative protection from moisture loss in packaged ground meat when stored at 8 deg. F., protected by sheets with a WVT rate (TAPPI) ranging from 1.3 to 9.0

Food packaging studies

4. Significance of WVTR in protecting frozen meat*.

by Dorothea Metcalf, Wm. P. Van Eseltine and G. J. Hucker

In the packaging of frozen foods either in unit or bulk packages, many factors contribute to the success of the final fabricated package. In contrast to the protection of dehydrated foods in which the food is protected against *gain* in moisture at high humidities, frozen foods require protection from moisture *loss* at low temperatures. In the storage of frozen food, temperature becomes a more important factor than relative humidity. In the lower temperatures (0 deg. to −40 deg. F.), the amount of humidity present is relatively low. Thus she vapor pressure at the surface of the foods is not so tignificant as in the storage of dehydrated foods at room temperature, or above.

Moisture loss in frozen foods is assumed to be reduced by packages or wraps of low water-vapor transmission rate.

It is the object of this study to determine the maximum water-vapor rate which will protect stored meat against significant moisture losses when stored at 34 deg. F., 8 deg. F., −8 deg. F. and −40 deg. F.

Methods

A series of sheets was prepared by the Sylvania Industrial Corp. and the E. I. du Pont de Nemours & Co., Inc. (Table 1) with a range of water-vapor transmission rates from 1.3 to 9.0 (TAPPI)[1] when tested flat. Small, flat single-sheet envelope packages were prepared 7 in. by 7 in. from these sheets with edges and top double heat sealed. These envelopes were used to package from 200 to 280 grams of finely ground beef containing approximately 25% fat.

The packages in triplicate series were weighed at various intervals during the seven months' storage period, the weights being taken in the conditioning rooms and the packages not removed for examination.

Data

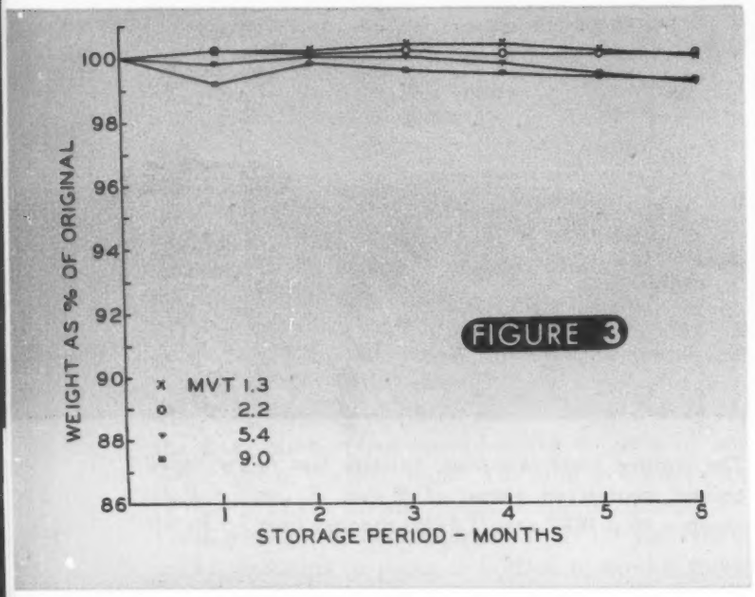
The present studies have indicated that there exists a relation between water transmission rate and moisture loss, particularly in stored frozen meat. The various sheets with graduated water-vapor transmission levels indicated certain comparative protection values which reflected the water-vapor porosity of the sheets.

WVTR of protective sheets and weight loss

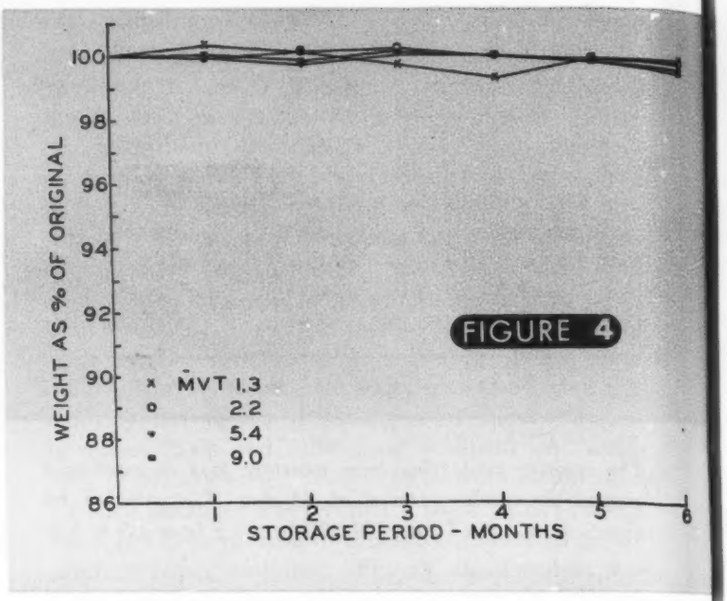
Waler-vapor transmission rate 1.3—When meat was stored for six months at the various conditioning temperatures in packages made from sheets with a water-vapor rate of 1.3 (TAPPI) flat and 1.9 creased a sheet of this low rate of water-vapor transmission afforded effective protection from moisture loss at 34 deg. F., 8 deg. F., −8 deg. and −40 deg. F. It is to be assumed that effective protection could be secured with a paper of a water-vapor rate of 1.3 or less if stored ground meat were to be protected over a period of six months or

* Journal Paper No. 658, New York State Experiment Station, Geneva, N. Y.

[1] Water vapor procedure as suggested by the Technical Assn. of the Pulp and Paper Industry. Values are grams water vapor transmitted per square meter per 24 hours at 73 deg. F., 50% R.H.



The relative protection from moisture loss in packaged ground meat when stored at −8 deg. F., protected by sheets with a WVT rate (TAPPI) ranging from 1.3 to 9.0.



The relative protection from moisture loss in packaged ground meat when stored at −40 deg. F., protected by sheets with a WVT rate (TAPPI) ranging from 1.3 to 9.0.

more in storage temperature ranging from 34 deg. to −40 deg. F.

Water-vapor transmission rate 1.6—A similar series of packages fabricated from papers with a water-vapor rate of 1.6 (TAPPI) flat and 3.5 creased indicated some variation in protective efficiency. A slight loss in weight could be noted at the end of four months and a loss equal to approximately 2% of the original weight at seven months when meat was stored at 34 deg. F. Duplicate series stored at lower temperatures indicated no appreciable loss.

Water-vapor transmission rate 1.9—When packages were prepared from sheets with a water-vapor transmission rate of 1.9 (TAPPI) flat and 2.9 creased to package finely ground meat and stored at various conditioning temperatures, no protection was indicated against a moisture loss when stored at 34 deg. F., although at the lower temperatures weight loss was negligible.

It is possible that a water-vapor rate of 1.6 to 1.9 is the critical point at which effective protection can be obtained when meat is stored at 34 deg., or above. Obviously, meat stored for long periods at this temperature may undergo changes other than moisture loss and such changes may indirectly affect the actual results as indicated by the water-vapor transmission rate of the paper.

Water-vapor transmission rate 2.2—When a series of packages was prepared from a sheet having a water-vapor transmission rate of 2.2 (TAPPI) flat and 3.7 creased and stored at the four conditioning temperatures for several months, it was noted that at the higher temperatures a paper of this porosity, in so far as water-vapor is concerned, did not prove an effective wrap. At a storage temperature of 34 deg. F., a loss of approximately 7% in total weight in moisture was found over a period of four months. At 8 deg. F. a loss of approximately 4% was noted. It is obvious if meat is to be stored at 0 deg. F. or above, that a wrap of greater density than 2.2 water-vapor rate must be used if protection against moisture loss is to be effective.

Water-vapor transmission rate 3.5—Meat stored at the various conditioning temperatures in packages made from sheets with a water-vapor rate of 3.5 (TAPPI) flat and 4.9 creased progressively lost weight over a period of seven months to the same degree as similar packages made from sheets with a water-vapor rate of 2.2. Differences in degrees could be noted, although a paper used to fabricate a package of water-vapor rate of 3.5 could very well protect ground meat from excessive moisture loss over a period of seven months if holding temperatures were 0 deg. F. or below.

Water-vapor transmission rate 5.4—Sheets with a water-vapor rate of 5.4 (TAPPI) flat and 13.8 creased as protective wraps for ground meat indicated in more bold relief the loss of effective protection at storage temperatures of 34 deg. F. and 8 deg. F. At the higher temperatures little protection was afforded by a sheet of this water-vapor porosity at the end of 2 to 3 months' storage. This was particularly true in the storage temperature of 34 deg. F., although at 8 deg. F. storage the loss in weight over a period of seven months was appreciable.

Water-vapor transmission rate 6.1—A sheet with a water-vapor transmission rate of 6.1 (TAPPI) flat and 18.2 creased indicated approximately the same results as a protective wrap as those with a rate of 5.4. Again, during storage at the higher temperatures, namely, 34 deg. F., an appreciable loss in weight was noted and to a lesser degree when stored at 8 deg. F.

Water-vapor transmission rate 9.0—When sheets of a higher porosity water-vapor transmission 9.0 (TAPPI) flat and 14.1 creased were used to fabricate packages in which meat was stored, a distinct and direct relation between storage temperature and loss of moisture was evident. In the higher temperatures of storage, particularly 34 deg. F., the loss of moisture was rapid when sheets of this water-vapor transmission rate were used, as losses as high as 14% of the original weight were noted. Protection was not afforded also when the meat was stored for a period of seven months at 8 deg. F. Again it should be observed that at −8 deg. F. and −40 deg. F., a sheet of this water-vapor porosity was effective.

Storage temperature and weight loss

In storing meat at various temperatures, there is a direct relation between the rapidity of moisture loss and the water-vapor transmission rate of the protective wrap or package. Meat was stored for a period of six months at 34 deg. F., and packaged in a series of wraps with water-vapor transmission rates varying from 1.3 (TAPPI) to 9.0 (Figure 1). The moisture loss was in direct relation to the porosity of the wrap. It is obvious in storage of meat at this temperature that a water-vapor transmission rate of 1.3 (TAPPI) or less is necessary for ample protection from moisture loss.

A similar series of packaged meat, stored at 8 deg. F. for a period of six months, indicated that the requirements in porosity of the package were less severe. The rapidity of the moisture loss was slower than in the case of the storage of meat at 34 deg. F. (Figure 2) and a sheet with a porosity of 5.4 or less might give ample protection at this storage temperature.

When meat was stored at −8 deg. F. or −40 deg. F., over a period of six months, it was apparent (Figures 3 and 4) that a more porous wrap could be used in the fabrication of the package and still maintain a minimum loss of moisture in the stored meat. The package made from a sheet with the water-vapor transmission rate of 9.0, although showing some loss in moisture over a storage period of six months at −8 deg. F., or −40 deg. F., was essentially as satisfactory as that made from the 1.3 sheet.

WVTR and weight loss at four months' storage

The relation between the water-vapor transmission rate of the package, moisture loss and storage temperature is obvious. Packaged meat stored (Figure 5) at 34 deg. F. lost moisture at the end of four months in direct proportion to the water-vapor transmission rate of the package material.

The same observation (Figure 5) was noted in meat stored at 8 deg. F. However, at this lower temperature, the losses were not as pronounced although the loss appeared in direct relation to the porosity of the package material. It is to be assumed from these observations that the lower the temperature of storage, the less the requirement necessary for protection in so far as the water-vapor transmission rate of the packaging material is concerned. This observation was also true even in those cases in which meat was stored for a period of four months at −8 deg. F. and −40 deg. F.

TABLE 1—MOISTURE-VAPOR TRANSMISSION RATES (TAPPI) OF PROTECTIVE WRAPS USED IN STUDY

Wrap Number	*Moisture Transmission Rate (Tappi)*	
	Flat	*Creased*
3076	1.3	1.9
3078	1.6	3.5
BP	1.9	2.9
3077	2.2	3.7
3079	3.5	4.9
BS	5.4	13.8
B_2CS	6.1	18.2
CSX	9.0	14.1

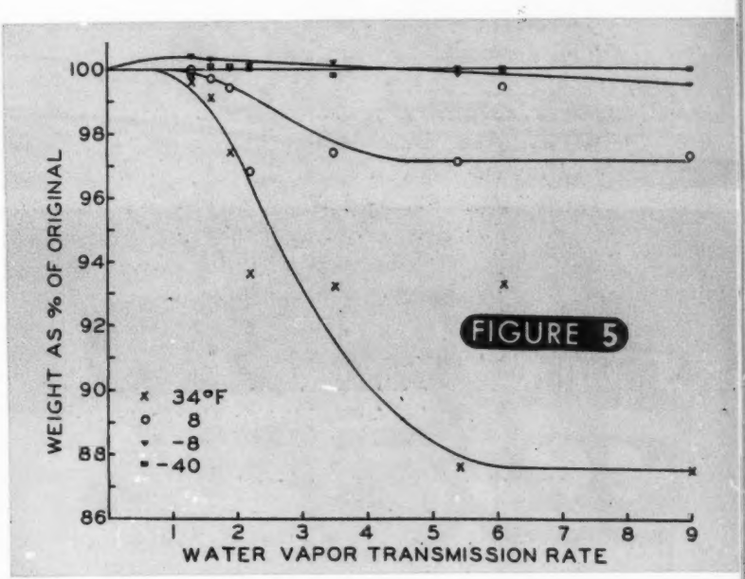
Conclusions

A. Moisture losses in frozen ground meat when stored for six months at 34 deg. F., or below indicate a direct relation between temperature and the water-vapor transmission rate of the protecting wrap.

B. A protective sheet with a water-vapor transmission rate of 1.3 (TAPPI) or less is required to reduce to a practical minimum the moisture losses when meat is stored at temperatures from −40 deg. F. to 34 deg. F. for six months.

C. Approximately 0 deg. F., appears to be the critical temperature of storage for ground meat from the standpoint of surface protection to reduce moisture loss to a minimum. Storage temperatures below 0 deg. F. allow a significantly greater range of water-vapor transmission rates than storage above 0 deg. F.

Moisture loss after four months in packaged ground meat held at various temperatures protected by packages with a variety of water-vapor transmission rates (TAPPI).



PI PACKAGING INSTITUTE

Standard Test Methods

3. For heat-sealing strengths and characteristics

1. Definition

The ability of thermoplastic substances to form a seal under specified conditions of heat, pressure and time.

2. Intent and scope

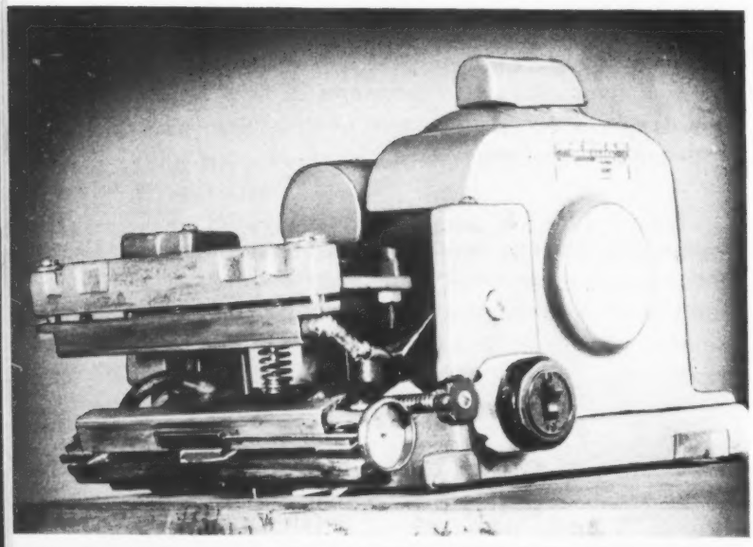
This method of test is to determine the sealing characteristics of thermoplastic materials and thermoplastic coated materials.

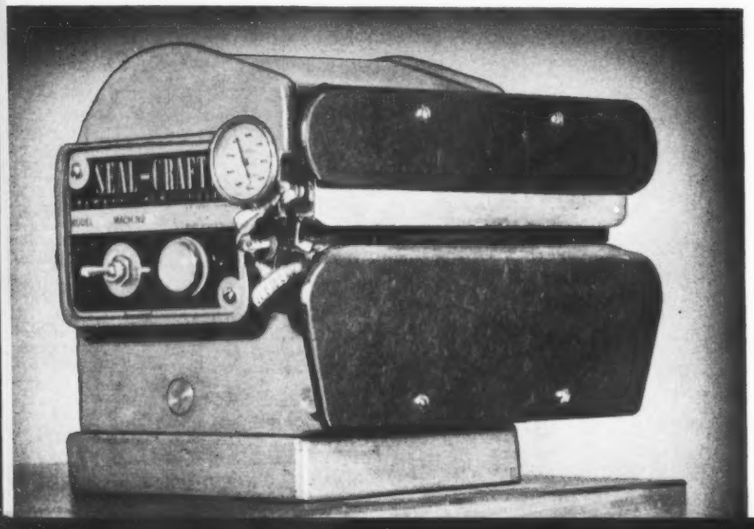
3. Apparatus

(1) Wrapade Sealer (Fig. 1) Model BG, Instrument #972 (Wrapade Machine Co., Newark, N. J.).

(2) Seal-Craft Sealer (Fig. 2), Model A (Ivers-Lee, Newark, N. J.).

Suitable heat-sealers for described testing procedure.





(3) Any other heat-sealing device of good mechanical design capable of being operated at controlled temperatures and uniform pressures.

A. Description—Heated smooth metal jaws closing with uniform and controlled pressures transmit heat and pressure to the sample material for a predetermined length of time. Jaws must be thermostatically controlled and capable of being adjusted from somewhat over room temperatures up to 500 deg. F. The jaws must be checked from time to time to be sure that they are in perfect mechanical alignment, free of side play and rocking and make perfect contact.

(1) Scott Testers (Fig. 3), Model X-5 (Henry L. Scott Co., Providence, R. I.)

(2) Suter Tester (Alfred Suter, Textile Engineer, 200 Fifth Ave., New York, N. Y.).

(3) Any other mechanically operated device as a suitable means of holding this specimen at a uniform rate of pull and means of recording the resulting strength values.

A. Description—These are mechanically actuated machines in which the seal of the specimen is stressed by a uniform movement of the pulling clamp to which one end of the specimen is attached, the other end being held in a clamp attached to a weighing device based on the principle of the pendulum. The *rate of pull is 12 in. per minute.* The pendulum device automatically registers the pull in grams required to break the seal on a calibrated scale.

(*1*) *Capacity*—The equipment has various means for changing the total loading, or larger size testers may be used, providing the loading is kept to at least 25% of the maximum measurable load. 1-in. specimens should be used whenever possible but it is permissible to use $^1/_2$-in. wide specimens to come within the loaded range of the maximum. Under no circumstances shall specimens be tested with widths less than $^1/_2$-in. In every case, the results shall be calculated and reported in terms of 1-in. of width of seal.

(*2*) *Calibration and Adjustment*—Before each seal test is made, the pendulum device must be set at zero to give proper readings. The testers must be calibrated once a month in the following manner:

Level the machine accurately in both directions and clean the mechanism to insure that it moves freely. Apply various dead weight loads to the clamp actuating the indicating mechanism and note the scale readings when the load and mechanism

come gently into an equilibrium position. This can be conveniently done with the pendulum-type of tester by wedging up the pawls holding the pendulum with a small piece of paper bent double, suspending the test weights to the upper clamp and allowing the pendulum to come to equilibrium from the direction in which it moves when the load is applied to it. The lower jaw should not be used for supporting the test weights during calibration. Make a record of deviations from the indicated readings and apply corresponding corrections to the test results. In general, the calibration of the scale should be checked at three or four widely spaced points, and if appreciable errors are found, enough calibration points should be used to allow construction of a correction curve.

4. Reagents and accessories

A. Two metal plates large enough to accommodate at least five samples.

B. PT cellophane slip sheets—300 gauge is normally used.

5. Test samples

A. Sampling—The test sample shall be representative of the material being tested. Ten samples an inch wide and about two inches long are cut for each temperature at which the material is to be tested.

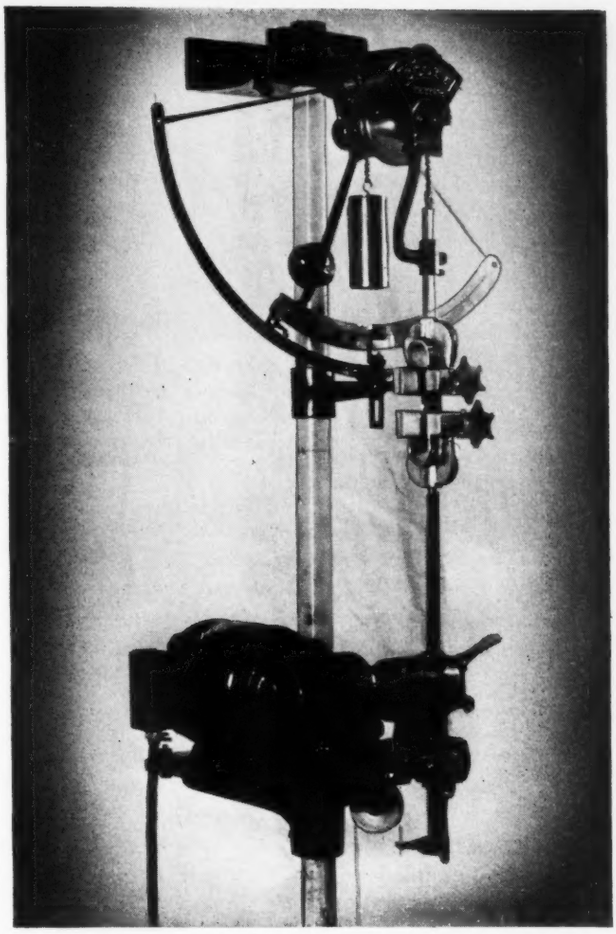
B. Preparation—The strips are paired with the heat-sealable sides in contact and marked with the temperature at which they will be sealed. If the material is coated on two sides, seals are made with the material face to face and back to back. Any samples which might adhere to the sealer jaws are inserted in a 300-PT cellophane slipsheet.

6. Procedure

A. Standard Conditions—All seals must be made accurately and with the proper technique in order to get correct results. The samples are sealed in the machine first at 125 deg. F. jaw temperature. The second set of five samples are sealed at 150 deg. F., etc., sealing each set at 25-deg. intervals up to 500 deg. F.

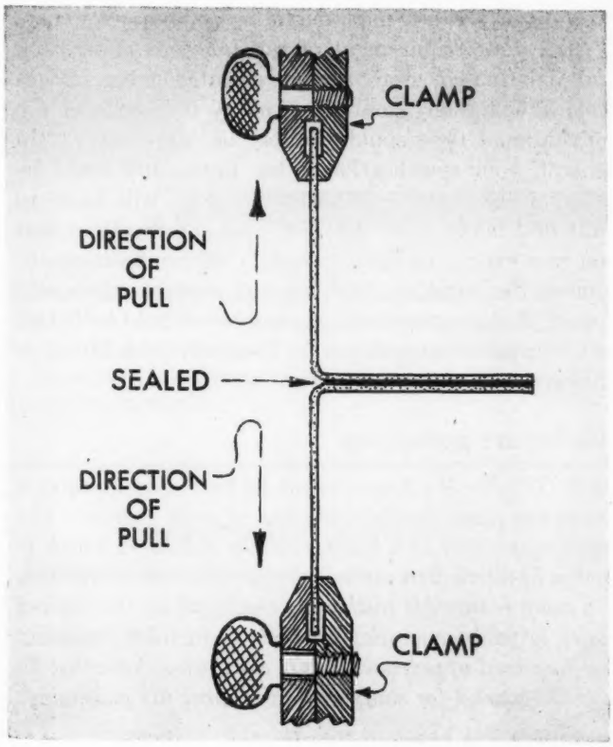
After each specimen has been sealed, the sealed portion is placed between two metal plates for a few seconds to allow the sample to cool and the seal to set while the two surfaces are in close contact. The jaws of the sealers must *be kept clean.* If, for instance, a carbon residue is allowed to build up on the jaws, the amount and rate of heat transmission to the sample will be affected, putting the results out of line. Therefore, the jaws are wiped clean after each seal is made. The seals are now set aside at room temperature to age—normally for one hour—before the seals are tested. All thermoplastic films, however, are aged a minimum of overnight to a maximum of 24 hours. The purpose of the extended aging period is to allow the film to regain its original physical state—which may have been altered by the heat.

After the seals have (*Continued on page 180*)



Tensile tester for determining the strength of the seal.

Sealed surfaces of sample must be parallel to clamps.



This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

Hot-melt sealing compound

QUESTION—We would like to obtain a hot-melt sealing compound having the following properties: Working temperature not over 200 deg. C.; resistant to mineral oil and chlorinated aromatics at 85 deg. C.; resistant to humid atmospheric conditions; non-brittle and capable of adhering to paper, metal and plastic; low shrinkage at temperature down to minus 40 deg. C.

ANSWER—The requirements which you have listed for the hot-melt composition you desire would be extremely difficult to meet with one material. For example, you ask for flexible coating on paper, metal and plastic. This coupled with your other requirements make it nearly impossible to find one material which would have satisfactory adherence to all three materials. You might, however, find a hot melt which would be satisfactory for particular kinds of each one of these material, but again the particular paper, metal and plastic must be specified and some change in composition of the hot melt might be necessary for each.

Also, your requirement of resistance to mineral oil and chlorinated aromatics at elevated temperatures make it extremely doubtful if many hot melts of the conventional type could possibly be satisfactory. In general, your specification is too broad and could be called a "shotgun" specification. You will have to limit and make more detailed your specifications and you can expect to have a variety of compositions to achieve the various properties you require. It would appear that the requirements you have could be better met by plastic coatings put on from solvent solution or finished at a high temperature.

Milk lactose packaging

QUESTION—We have a client in Peru who operates a processing plant for the extraction of milk lactose. The resulting product is a gummy, sticky substance which is packed in wax with a carton exterior. Our client inquires if a more reasonable method is employed in the United States to package similar products to facilitate handling and improved appearance. Our client also states that he is in the market for equipment to improve his packaging.

ANSWER—It is impossible to give any effective suggestions or help with the limited knowledge of your client's present package construction. Purified milk sugar or lactose is not particularly hygroscopic and should not prove too difficult to package for shipping and handling in a temperate zone. However, if your client is interested in tropical packaging, the lactose will require considerably greater protection against moisture gain and the resulting caking and spoilage. Your client should submit sample packages containing the product and the materials which he is now using, together with details as to the location and kind of complaints and the difficulties he is having with his present combination of materials. Your client should further submit any information concerning the packaging equipment he has available and if he is interested in new equipment he should indicate the size of packages he expects to produce, some estimate of number per day and whether he can use complete mechanization.

With the foregoing information, it would be possible to suggest various courses of action to your client and to give recommendations which would aid him.

Restamping glassine

QUESTION: We are interested in knowing if there is any inexpensive convenient system of relabeling or remarking our present glassine bag to indicate $^3/_4$ oz. net weight in lieu of one ounce. A sample of our bag is enclosed herewith. We have a large inventory on hand and are now required to consider changing the net weight if a suitable inking or printing process is possible without undue cost or inconvenience.

ANSWER: The bag which you submitted is a printed and lacquered glassine. This means that you will have to use a special type of ink to get adhesion and permanence to any over-marking which you might do. There are several companies which specialize in the manufacture of special inks and hand stamps for applications to special materials. Under separate cover you will receive the names of such companies.

With a hand stamp and with the proper inks you can, by hand labor, re-mark these bags if you desire. It might be possible for you to set up an improvised job press but it is doubtful if there is any saving over completely manual operation.

"Hands-Off" Visibility

NO need to choose between *protecting* merchandise against shopwear, dust, handling . . . and *displaying* it prominently, invitingly, so that customers simply can't pass it by. Not any more!

Packages fabricated of Eastman Acetate Sheet provide all the protection any merchant could ask for. At the same time—thanks to their transparency, their sparkling optical clarity—they display products at their best . . . show them attractively, in their true colors . . . offer customers a standing invitation to stop, look, and buy . . .

The current supply of Eastman Acetate Sheet is not sufficient to meet the continually increasing demand. But the Kodak Transparent Packaging Laboratory, in Rochester, is always available to demonstrate fabrication methods.

Cellulose Products Division

Eastman Kodak Company, Rochester 4, N.Y.

Eastman Acetate Sheet

Attracts . . . Protects . . . Sells

Kodak

WASHINGTON REVIEW

● **The New OPA**—A number of chemically created packaging materials have been removed from price control within the past few weeks, and there are several others due for such treatment, OPA officials tell MODERN PACKAGING.

Removed are polystyrene and all vinyls, used in making transparent, water vapor resistant wraps. Also removed is WVT paper which contains 12½% or more of asphalt.

Reason for removing these products (and adhesives are due for removal before long) is that for the most part they were selling below ceiling prices anyway, particularly polystyrene and vinyls.

However, as far as most paper products are concerned, there is no immediate likelihood of their being decontrolled. An OPA spokesman says that even cellophane will have to wait some time before being removed from the control list.

● **Price Control Items**—Resumption of Price Control and the restoration of OPA brought back a number of adjustments designed to ease shortages of certain basic packaging materials.

Manufacturers of pads, partitions and other inner packing materials designed for use in corrugated, solid fibre or wooden shipping containers may use current acquisition costs in estimating their ceiling prices.

Manufacturers' ceiling prices on five grades of paperboard have been given increases ranging from $5 to $7 per ton.

● **Bleached Waxing Papers Stabilized**—Action of OPA in stabilizing manufacturers' base ceiling prices at the same level—$8 per 100 lbs., or $160 per ton—had the effect of increasing ceiling price of Northern bleached sulphate about 75 cents per hundred, and a corresponding increase in Southern bleached sulphate is expected to result as well. While bleached sulphate makes up but a small part of the waxing papers used in food packages, it is an essential part, since some products require the special qualities of 100% sulphate paper. At the same time, OPA changed the definition of bleached waxing paper to include basis weights up to 75 lbs., which extended coverage of the regulation (RMP 129) to include heavy grades such as are used in making waxed drinking cups.

● **Wood Pulp from Finland**—Imports of wood pulp from Finland during the last half of this year will be about 100,000 short tons, compared with about 35,000 short tons during the first half, CPA reports.

● **Fresh Produce Shipping Containers**—Use of shipping containers which "sacrifice . . . protection of contents . . . for display purposes" is one of the chief factors in the present heavy damage in rail transportation of fresh fruits and vegetables, P. L. Breakiron, transportation economist for the Agriculture department points out in an article, "Reduction of Loss and Damage in Rail Transportation of Fresh Fruits and Vegetables by Improved Loading Methods," published in the Department pamphlet, The Marketing and Transportation Situation (obtainable from the Bureau of Agricultural Economics upon request).

"Many containers used in the shipment of fresh fruits and vegetables do not provide sufficient protection for their contents," the economist asserts. "In some instances, strength and protection of contents have been sacrified for display purposes. An example is the honeydew crate. This crate is, in a sense, an oversized lug box. From the standpoint of protection, the honeydew crate is definitely not a suitable container for shipping this commodity. . . . Larger and more rigid containers, with little or no bulge, would provide more protection than the crates now in use.

● **Relief for Box Makers**—Non-integrated manufacturers of paperboard folding and set-up boxes may now add to their previous ceiling prices any increases incurred in raw material costs since May 15 (with the exception of those incurred during the non-OPA period, from July 1 to July 25), under an OPA ruling. The action does not apply to manufacturers fully or partly owned, controlled by or financially connected with raw material suppliers.

● **New Casein Ceiling**—A new and higher ceiling for inedible industrial casein, to reflect the higher price of milk, has been promised by OPA. Meanwhile, producers of this commodity have been told to sell their output at the existing domestic ceiling of 33 cents a pound and then bill purchasers for the additional amount as soon as OPA makes the announcement of the new ceiling.

● **Packing Cases Lend Weight to Transportation Crisis**—The country and the food industry last month faced their most serious transportation crisis—and the crisis was not limited to lack of railroad cars. Shipping containers were short and promised to continue to be so through this month.

Record breaking crops, increasing industrial production, requirements of priority programs, such as housing (which is diverting a sizable part of lumber production from containers to housing), found the country in a difficult spot.

The paperboard and shook shortages are the primary factors in the paucity of containers—either for shipping or for display after shipping. The rail-car shortage is working both ways.

● **Overseas Packaging**—With the announcement by Commerce department of procedural details of an arrangement with the British Government for importation into the United Kingdom of token shipments of U. S. brand name products, U. S. makers of shipping containers as well as those who make packages for retail display and sales are now setting their signs on a resumption of trade with the British Isles and their dependencies, into which the importation of certain products was not approved during the war. Under the arrangement, the British Government has modified its embargo of goods classified as non-essential (such as ladies felt hats, spark plugs and face powder, to name but a few). Naturally, these exports will have to be packaged (1) for sale to retail purchasers in an English-speaking nation, and (2) to protect them from the hazards of ocean shipment.

The "break" in approval of overseas shipments to Britain may be interpreted as a step toward renewal of America's export trade, in the opinion of officials here.

● **Directive 9 Continuance**—CPA will continue Directive 9, setting aside rolled steel for can and container makers, in the face of industry opposition. However, instead of an 85% set aside, the percentage probably will be cut to 65 to 70% of production. The primary reason is that Wilson Wyatt's housing program has the highest priorities.

THE VITAL TEN-THOUSANDTHS OF AN INCH

Viscosimeter for ascertaining the proper viscosity or "flow" of an enamel or lacquer.

Your reputation, and that of your product, often depend upon a coating of enamel or lacquer measuring only a few ten-thousandths of an inch in thickness . . . that thin film inside the can may spell success or failure. Chemical composition, adherence, special resistance to certain products, impermeability, freedom from taste . . . are but a few of the factors entering into the choice of the proper coating.

Crown Can Company chemists, through modern research and years of experience assure you that your can coating will be right for your product. But Crown service does not stop with the choice of the proper coating . . . of course, it proceeds to assure you that it will be applied at the right viscosity, assuring a uniform flow on the sheet metal.

CROWN CAN

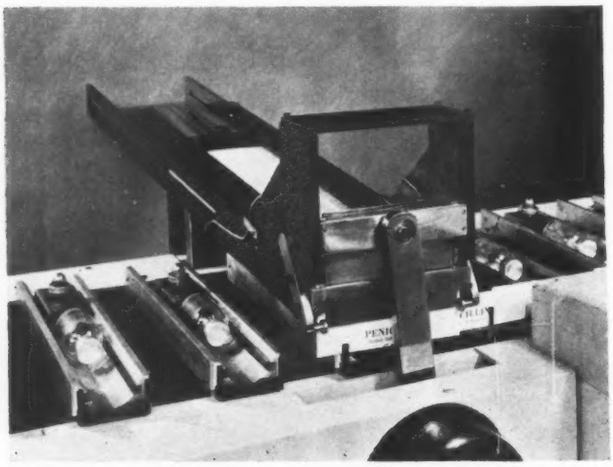
THE NATION'S THIRD LARGE SOURCE OF SUPPLY

CROWN CAN COMPANY • PHILADELPHIA • Baltimore • Chicago • St. Louis • Houston • Orlando • Fort Wayne • Nebraska City

Equipment and Materials

NEW CARTONING MACHINE

The latest automatic cartoning machine developed by A. H. Ross Co., Inc., Ludlow, Ky., to facilitate the packaging of penicillin, also may be used to handle tubes or bottles in any cartoning problem of a similar nature, the company claims. In the case of bottles, these are fed from the labeling machine to the cartoning machine where, by the use of air, prefolded circulars are separated and automatically fed into position ahead of the bottles ready to be inserted into the cartons. Photo shows the front of the magazine where the carrier pocket is advanced into position for receiving the prefolded circular. When it is received, retracks lap the circulars over each other, so that it is possible to use long circulars on close pocket centers.



Machine also imprints code dates and other information, by the rotary press method, on the flap or face of the carton. This method of loading cartons has been successfully used on bottles, collapsible tubes, candies, tooth brushes and pudding powder in envelopes, the company states.

PORTABLE HEAT-SEALING UNIT

Cleveland Lathe & Machine Co., Cleveland, Ohio, announces a new portable, heat-sealing unit known as the Crimpmaster, primarily for sale to users of deep-freeze equipment, store and locker plants. This new model made entirely of aluminum, weighs approximately five pounds, stands about 8 in. high and may be used anywhere simply by plugging into an outlet—110 volts AC or DC current. To operate merely insert top of bag between the two sealing jaws and press lever with back of hands.

PRINTED-TO-ORDER PRESSURE SEALING TAPES

Cofax Corp., Lynbrook, N. Y., announces that it is now in position to print special design, trade marks, etc., in any one color on any one of nine brilliant background colors on their line of Cofax pressure-sealing tapes. The printing is said to be rub- and smudge-proof; tapes come on a standard 3-in. core in any width from $\frac{1}{2}$ in. to 21 in.

WRAPPING MACHINES FOR BAKERY PRODUCTS

Lynch Package Machinery Corp., Toledo, Ohio, announces two new wrapping machines specially designed for bakery and confectionery products. Model L.P.B. wraps large size candy bars, multiple stacks of biscuits, cookies and other related bakery products on a cardboard base or boat. It has a capacity of 75 to 80 packages per minute and handles any size from $6\frac{1}{2}$ in. long by $2\frac{1}{2}$ in. wide by $1\frac{1}{4}$ in. high up to 12 in. long by 4 in. wide by 4 in. high. Adjustable up to 2 in. in both length and width to handle slightly different size products. Operates using cellophane, glassine, Pliofilm, wax paper or foil.

Single stacks of crackers, wafer sandwiches, peanut butters, etc., may be cellophane wrapped without the use of collars, trays or cardboard stiffeners, at the rate of 75 to 80 packages per minute, by their Model S.W. It handles a maximum size of 3 in. high and $2\frac{1}{4}$ in. in diameter on either round or square items; and is easily adjusted to wrap packages varying from $1\frac{1}{2}$ in. up to 3 in. in height, so that three to six or more crackers can be handled in one package. The folding head has a $\frac{1}{8}$-in. tolerance over and under the size specified which permits the wrapping of two or three different size diameter cookies on the same folding head. This tolerance also serves as a safety factor when product control varies.

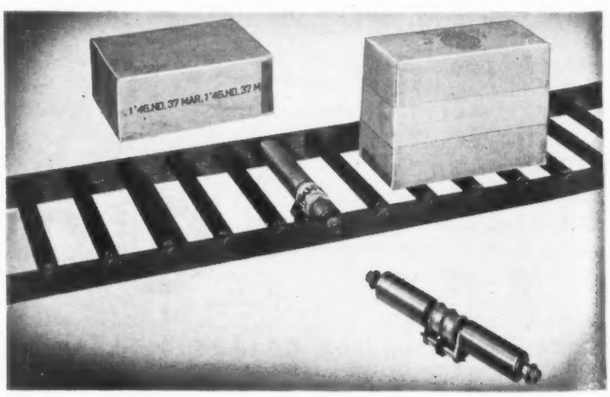
Both models are equipped for electric eye which assures proper registration of printed wrapper, and both require only two operators—one to feed and one to take away and pack the wrapped packages.

DECALCOMANIAS APPLIED TO LEATHER

A method of applying decalcomanias to leather and leatherette has been developed by the American Decalcomania Co., Chicago. The decal is said to become part of the surface, and it is claimed that it will flex with the leather without peeling, cracking or blistering. Any type of pyroxylin- or lacquer-coated leather lends itself to this type of application, and embossed or grained finishes work equally well, it is said. The company offers to apply decals to samples at no cost or obligation.

MARKING DEVICE

A new automatic marking attachment is Adolph Gottsch Inc's. Rolacoder "50," specially designed for placing a continuous impression on the bottom of a case as it travels along on a roller conveyor. The attachment consists of a self-inking assembly installed in a roller conveyor in place of one of the standard rollers. The type cylinder carries a channel or slot into which the interchangeable rubber type is inserted. Inking is by two felt ink rollers in contact with the type. Will imprint a code or mark; repeating approximately every six inches. Top surface of carton may be marked by delivering them to the conveyor upside down.



Shelf competition demands a package that Stands Out!

When shoppers' eyes scan dealers' shelves your product can stop them and turn "eyers" into buyers—if it is packaged in an A. C. M. *Clay Coated* Carton!

These famous cartons stand out on dealers' shelves because they're "stand-outs" in quality. Their pure-white, velvet-smooth surface, produced by an exclusive, continuous process, assures perfect reproduction of any design in either letterpress or lithography.

There's a luster and brilliance to A. C. M. *Clay Coated* Cartons that puts them out in front wherever displayed. They do the dual job of capturing attention and selling the quality and value of the product they contain.

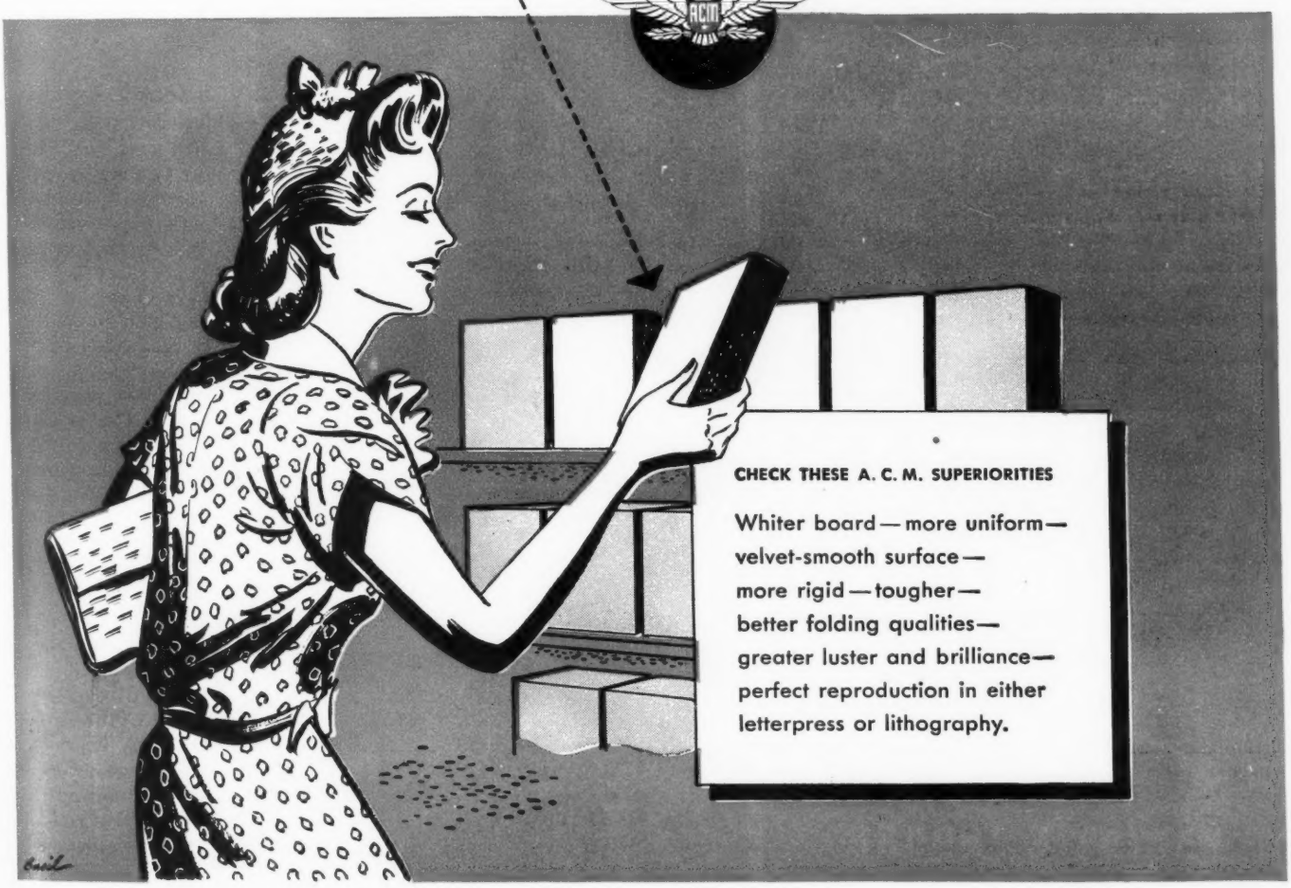
AMERICAN COATING MILLS, INC.

America's leading producer of high quality Clay Coated Cartons and Carton Board

Elkhart, Indiana • Chicago • New York

Affiliated Company: Modern Packages, Inc., Memphis, Tenn.

The Secret is in the SURFACE!



A.C.M. Clay Coated Cartons and carton board

Plants and People

Lloyd I. Volckening, president of **Ivers-Lee Co.,** Newark, N. J., on his recent return from a trip to Europe, announced the formation of **Ivers-Lee Great Britain, Ltd.** The new organization will be under the direction of **John Mackenzie,** 49 Park Lane, London. Packaging services similar to those offered by the Newark firm will be maintained in Britain and, in addition, the new company will manufacture packaging machinery.

Ernest D. Grinnell has been named general traffic manager for **Gaylord Container Corp.,** St. Louis, Mo., succeeding the late **M. J. McMahon.**

Thomas J. Reese, Jr., has been appointed Buffalo branch manager for **International Printing Ink Division of Interchemical Corp.**

F. Ray Linda has joined **St. Regis Paper Co.'s** New York office as assistant to **Carl H. Hartman,** director of technical development and vice-president of **St. Regis Sales Corp.**

J. L. Ferguson Co., Joliet, Ill., maker of **Packomatic** packaging machinery, is celebrating its 25th anniversary.

Kilroy Co., 402 Highland Bldg., Pittsburgh, Pa., has been appointed sales representative of **Triangle Package Machinery Co.,** Chicago, in Western Pennsylvania, New York and Virginia, Eastern Ohio and West Virginia.

Warner Bros. Co., Bridgeport, Conn., makers of set-up and folding boxes, acetate containers and counter displays, has announced the following personnel promotions: **John Van Ort,** works manager in charge of production for folding box, printing and set-up box depts.; **Irving Cullen,** superintendent of folding boxes; **Bion Tingley,** superintendent of printing; **Nicholas Marchese,** superintendent of set-up boxes; **Frank Marchese,** sales manager and head of advertising and publicity, and art and designing; **Clarence E. Haber,** office manager and head of purchasing.

Fibreboard Products, Inc., San Francisco, Calif., has announced that construction is now under way on its $24,000,000 3-year expansion program. On completion of the program, Fibreboard will have some 6,000 employees, a large percentage of which will be workers in the company's carton and shipping container plants.

B. M. Thomas, formerly with the **American Coating Mills,** has joined **The Ohio Boxboard Co.'s** production department, Rittman, Ohio.

Correction

GEORGE J. PRAGER is president and general manager of **Unicrafts, Inc.,** Amherst, Mass., manufacturers of printing, embossing and specialty machines. Mr. Prager has no connection with Norwood Engineering Co., as was erroneously reported in our August issue, and has not been with Norwood since December, 1945.

Ralph C. Persons has succeeded **Arthur S. Thompson** as general manager of the **Geo. H. Morrill General Printing Ink Division of Sun Chemical Corp.**

W. Douglas Peters has been named assistant general sales manager, foil division, **Reynolds Metals Co.,** Richmond, Va.

Ball Bros. Co., Muncie, Ind., has announced the appointment of **Earl A. Sheffield, H. S. Miller** and **Marvin Babcock, Sr.,** as assistant sales managers.

Midwest Packaging Materials Co., recently organized St. Louis, Mo., corporation has acquired all the outstanding stock and the plant of **Midwest Wax Paper Co.,** Fort Madison, Iowa, manufacturer of waxed and unwaxed packaging papers.

The Package Machinery Co., Springfield, Mass., has acquired the **Pratt & Whitney** plant in East Longmeadow, Mass., from the War Assets Administration.

Stanley Sapery has resigned as sales manager for **Victor Metal Products Corp.,** Brooklyn, N. Y., to open his own office as packaging manufacturers' representative at 11 E. 44th St., New York.

Construction has started at the Savannah, Ga., plant of **Union Bag & Paper Corp.,** on electrical precipitator equipment designed to eliminate smoke and odors resulting from gases released in the kraft pulp manufacturing process.

Norman McKean has been appointed executive secretary of the **Point of Purchase Advertising Institute,** N. Y.

The Aluminum Co. of America has applied to the **Civilian Production Administration** for permission to erect a plant in Des Plaines, Ill., for the manufacture of aluminum die castings.

Phyllis L. Sloane and **Newson Shewitz** have announced the opening of an industrial design office at 2422 Prospect Ave., Cleveland, Ohio. The name, **PDA,** stands for packaging, design and advertising.

Neoprint Products has been formed under the direction of **T. Witonski** for decorating glass, plastics and metal containers located at 70 Greene St., N Y.

Peter Vogel has been appointed advertising manager of the **Cofax Corp.** of Lynbrook, N. Y., makers of dry seal tapes.

A packaging machinery department has been established by **Union Bag & Paper Corp.,** New York, to help solve customers' packaging problems, under **R. E. Read.**

Paisley Products, Inc., Chicago, Ill., has purchased the adhesive division of **Certified Products Co.,** Chicago. The purchase includes all formulas, manufacturing processes, raw materials and products, and the consolidation will provide increased service to the Middle West, Gulf States, Southwest and Western territories. **J. F. Sequin** has been appointed Texas and Oklahoma representative.

Richard M. Krause, head of the firm bearing his name, died August 2 after a short illness, thus ending a career identified with the packaging field for nearly half a century. In 1905, after several years of experience as an artist and an engraver, he formed his own company for the production of high quality embossed, diecut and color-printed labels of paper and metal foils. His own research and experimentation enabled him to develop methods and processes which rivaled the closely guarded secrets of French craftsmanship. The business continues under the direction of Richard M. Krause, Jr.

R. M. Krause

J. W. Klapper, sales manager for **The Bradley & Gilbert Co.,** Louisville, Ky., died suddenly on July 4.

Logan G. Thomson, president of **The Champion Paper & Fibre Co.,** died Aug. 9, while on vacation in California. Starting as a laborer in the mill, Mr. Thomson had been with Champion for 41 years. He served as a captain in World War I.

L. G. Thomson

Carlton F. Sturdy, special representative for **American Can Co.,** died of a heart attack in New York on July 25.

carton charm

People today are becoming more and more aware of good packaging. Millions have been spent to make customers reach for the pleasing designs and color combinations when browsing among related products.

Our research covers the field in which your merchandise must compete. With this knowledge we are able to imbue your package with the vitalizing force it will need to make it stand head and shoulders above the crowd.

Ready acceptance of your product means more cartons. We manufacture cartons but more than that we design them to insure repeat orders.

BROOKS & PORTER, Inc.

304 HUDSON STREET • NEW YORK

Packaging and Display Specialists for half a century

For Your Information

The Large Chip Edition of the **Color Harmony Manual,** recently published by **Container Corp. of America,** provides two and one-half times more working area than the color chips in the first 1942 edition. (*See Modern Packaging, Oct. 1942, p. 54*). The large size increases the speed and ease with which color matching is accomplished. The new edition of the Manual may be purchased from Container Corp.'s Color Laboratories Division, 111 W. Washington St., Chicago, Ill.

The 1947 Industrial Packaging and Materials Handling Exposition, sponsored by the **Industrial Packaging Engineers Assn. of America,** 134 S. LaSalle St., Chicago, Ill., is expected to be the greatest ever presented, according to **R. Frank Weber,** association president. Scheduled to be held at the **Hotel Sherman,** Chicago, April 29–May 1, the 1947 exposition will be under general chairmanship of **A. C. McGeath,** of the **American Box Board Co.**

An expose of the mis-use and counterfeiting of well-known trade names of perfumes, cosmestics and other toilet preparations is contained in **"Perfume Rackets,"** a booklet recently published by **The Toilet Goods Assn., Inc.,** and **The Perfumery Importers Assn., Inc.** Copies are available on request to 9 Rockefeller Plaza, New York.

Production of folding paper boxes in the U. S. hit an all-time high during the first six months of 1946, according to **A. E. Murphy,** executive director of the **Folding Paper Box Assn. of America.** Output totaled approximately 900,000 tons, an increase of about 10% over the similar period last year. The record-breaking demand for cartons, Mr. Murphy said, has resulted largely from three factors: the upswing in production of consumer goods, resumed manufacture of items dropped during the war and a trend toward boxing of many products previously sold in bulk or in other types of containers.

A new digest-size trade publication devoted to the problems of retailers of hardware and allied lines, entitled **"Your Business,"** has been introduced by **Liberty Distributors,** 14 N. 5th St., Philadelphia, national organization of hardware wholesale distributors. One-year subscriptions are available to retailers at a cost of $1.

The packaging of fish will be featured in one of the editorial sections of a new monthly business magazine, **"American Fisheries,"** scheduled for introduction next month by **Log Publications,** 230 E. Ohio St., Chicago.

Suggestions for display settings and various types of display corrugates in color, to provide new backgrounds for window trimming, are contained in the **"Display Guide"** booklet published by **Sherman Paper Products Corp.,** Newton Upper Falls, Mass. Copies are available on request to the firm.

Methods for home-freezer preparation and packaging of fresh fruits and vegetables, cooked foods, ice cream, wild game and fish are interesting points covered in the recently published book, **"Into the Freezer—and Out,"** by **Donald K. Tressler, Clifford F. Evers** and **Lucy Long.** Copies priced at $2.50 are available from **The Avi Publishing Co., Inc.,** 31 Union Square, New York 3, N. Y.

The Natl. Assn. of Frozen Food Packers, 1415 K St., N.W., Washington, D. C., has set up a committee under the chairmanship of **E. J. White, Western Frozen Foods Co., Inc.,** San Francisco, to develop plans for the **1947 Frozen Food Convention and Exposition** to be held in San Francisco the week of March 3.

Volume 19 Index of MODERN PACKAGING, **September 1945 to September 1946** is off the press. Copies are available free to any subscriber on written request to the **Editorial Department.**

What's doing

Sept. 20–22—**Window Advertising Associates** convention, Continental Hotel, Chicago.
Sept. 21–26—**National Wholesale Druggists Assn.,** Atlantic City.
Sept. 26–28—**32nd National Conference on Weights & Measures,** Mayflower Hotel, Washington, D. C.
Oct. 6–7—**Independent Food & Grocers Assn. of New Hampshire,** Tavern Hotel, Nashua, N. H.
Oct. 8—**Liquid Tight Paper Container Assn.** (regular monthly meeting), Waldorf-Astoria, New York.
Oct. 17–19—**13th annual meeting, National Assn. of Food Chains,** Drake Hotel, Chicago.
Oct. 21–26—**Dairy Industries Exposition and meeting of International Assn. of Milk Dealers,** Convention Hall, Atlantic City.

Designers and students of lettering will be interested in the recently published book, **"How to Render Roman Letter Forms,"** by **Tommy Thompson.** A study of its organized assemblage of simple elements shows how to render all styles of lettering with proper weight, proportion and spacing. Copies, priced at $2.50 each, are available from the publisher, **American Studio Books,** 381 Fourth Ave., New York 16.

Packagers who use direct-mail advertising will be interested in **Harrie A. Bell's** new book, **"Getting the Right Start in Direct Advertising."** Copies priced at $4 each, are available from the publisher, **Graphic Books, Inc.,** 17 E. 42nd St., N. Y.

The nation's aluminum production capacity, increased seven-fold during the war, is still four times as large as in the peak prewar year, according to **George R. Gibbons,** of the **Aluminum Co. of America.** Despite this increased production capacity, shortages in aluminum products will continue to exist for some time, he said, because strikes, slow-downs, material shortages, rising costs and other related factors added to the delays of reconversion and have retarded production. Mr. Gibbons attributed the postwar demand for aluminum, which is greater than in any previous peacetime period, to the many new applications for aluminum, its relatively low price and newly developed superior aluminum alloys.

Bemis Tite-Fit tubing was used to cover 22,000 lbs. of compressed clothing recently shipped by the **United Church Service Center at St. Louis** to Poland for relief purposes.

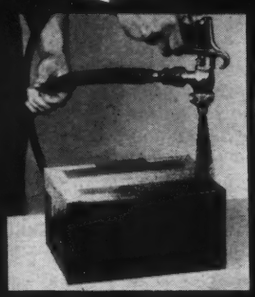
A 3,485-lb. AMF standard bread-wrapping machine manufactured by **American Machine Foundry Co.,** New York, was shipped by air freight from Newark Airport to **Mrs. Karl's Bakeries, Inc.,** in Milwaukee, Wisc. The wrapper was boxed in two crates, one weighing 3,525 lbs. and the other 1,025 lbs.

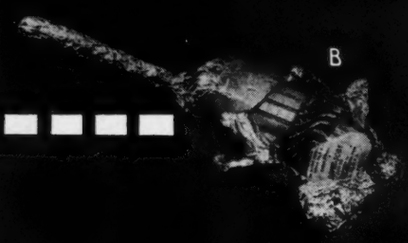
The need for a standardized method of procedure for testing cushioning materials was conceded at a recent meeting of industry and Army-Navy representatives, held at the **Kimberly-Clark Corp.,** Chicago, under the chairmanship of **Lt. Comdr. Clinton K. Royce,** secretary of the **Navy Packaging Board.** Comdr. Royce appointed a five-man committee under the chairmanship of **A. J. Beinfang,** of the **Packaging Development Unit,** Wright Field, to study and report on the subject.

Davison Service

eliminates losses . . .

due to moisture damage





in all climates

under all conditions

Davison Field Representatives are at your service without obligation to solve every packaging problem involving the prevention of mildew, mold, rust and corrosion to goods between your factory and the consumer regardless of climate.

A: Dehydrated Packaging using Protek-Sorb* silica gel as the desiccant and transparent barrier.

B & D: Dehydrated Packaging using Protek-Sorb silica gel as desiccant—Protek-Film† asphalt compound and metal foil as barrier.

C: Protek-Coat† asphalt compound—moisture vapor proof barrier—low cost and effective.

THE DAVISON CHEMICAL CORPORATION

Progress through Chemistry

BALTIMORE 3, MARYLAND

†T.M. Reg. App. For *Reg. U. S. Pat. Off.

Canadian Exclusive Sales Agent for PROTEK-SORB silica gel • CANADIAN INDUSTRIES LIMITED • General Chemicals Division

U. S. patent digest

edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Knotted-Loop Work Which Cannot Unravel When Cut and Method of Producing Same, R. F. Morcaldi D', Boston, Mass. U. S. 2,402,568, June 25. A method of producing with a straight, smooth needle a knotted-loop work that cannot unravel or run in case of severing of a thread, which consists in the format on from a continuous strand of a series of uniformly spaced and connected knots along the edge of a textile fabric.

Moistureproof Wrapper for Packaging Cheese and the Like, T. Cowen (to Standard Cap and Seal Corp., a corporation of Virginia). U. S. 2,402,605, June 25. A wrapping material comprising a film of regenerated cellulose having a lacquer film thereon composed principally of nitrocellulose, polyvinyl butyral resin and a plasticizer and a wax coating superposed on said lacquer film.

End Plate for Bundle Accessories, H. C. Wolf, Cleveland, Ohio. U. S. 2,402,701, June 25. An end member for securing a group of similar individual containers, said member comprising a strip joined together at its ends and formed with a flange adapted to embrace a portion of each container, an internal rib intermediate the depth of the strip, said strip having adjacent the rib an inturned bead, a bracing member within the strip member comprising a plurality of radially extending arms joined at a point substantially central of said strip member with their outer ends secured to the upper side of the rib, and a ball rockably secured to said arms with its gripping portion positioned to be sprung under the bead in folding position.

Apparatus for Packaging, T. B. Buchanan & C. B. Pape (to Reynolds Metals Co., Richmond, Va.). U. S. 2,402,869, June 25. In an apparatus for packaging, an inclined slideway support, means carried above said slideway for receiving and expanding an envelope-type bag, said last-named means comprising an upper member held in fixed position upon said support and pivotally mounted lower member, both members being open at the ends.

Container, B. Bogoslowsky, Jackson Heights, N. Y. U. S. 2,402,943, July 2. A container comprising a seamless cup-shaped body formed from a flat sheet of material and having a substantially flat bottom portion and pleated side walls, the upper section of said pleated side walls being reversely folded and extending downwardly from an upper edge formed by said fold substantially parallel to said side walls, a closure for said cup-shaped body, closure being formed from a second sheet.

Container, H. E. Braloff, Rockville Centre, N. Y. U. S. 2,402,944, July 2. A fibrous container comprising a collapsible tubular body having an inwardly folded portion at one end thereof to provide a shoulder within said body, a rigid disc hingedly connected to said body and movable therein into abutting engagement with said shoulder in frictional peripheral engagement with the inner surface of the body to form a bottom closure for the container, and equipped with circumferentially spaced staples projecting inwardly to form a plurality of shoulders therein.

Bandage Package, G. D. Beal & C. Y. Emery (to Chesebrough Mfg. Co., Consolidated, N. Y.). U. S. 2,402,981, July 2. A surgical bandage package comprised of a single folded strip of fabric having the successive folded edges offset in stepwise arrangement, said strip being saturated with an adherent and cohesive liquid material, and an envelope of flexible protective material enclosing the pile of folded fabric and sealing said liquid within the package.

Bandage Package, C. Steenberger (to Chesebrough Mfg. Co., Consolidated, N. Y.). U. S. 2,402,982, July 2. A surgical bandage comprising a plaited strip, a protective envelope of flexible, tearable material enclosing and tightly sealing the folded strip against penetration of contamination, one end of the folded strip being folded to form a bight, and a thread in said bight and having its ends secured to portions of the protective envelope whereby, upon tearing away said portions of the envelope, forming an opening therebetween.

Can, R. S. Solinsky, Chicago, Ill. U. S. 2,403,030, July 2. A container having an upstanding open neck and a detachable flexible cover, said cover having a downwardly facing channel around the periphery thereof into which the neck extends, and equipped with interlocking projecting means to secure the cover in place.

Apparatus for Making Collapsible Tubes, B. Bogoslowsky, Jackson Heights, N. Y. U. S. 2,403,042, July 2. Apparatus for making a finished collapsible tube from an embryo tube having a tubular body and a shoulder and elongated tubular neck integral with said body, comprising a mandrel adapted to support embryo tube internally and means for pressing the shoulder of tube against mandrel, and means for applying longitudinal pressure to said neck to compress said neck.

Carton or Container, K. T. Buttery (to Sutherland Paper Co., Kalamazoo, Mich.). U. S. 2,403,047, July 2. A carton formed of an integral band and comprising front, rear and end walls and a sealing flap overlapping one of the end walls and adhesively secured thereto, and having inner closure members extending from the ends of the rear walls and having out-turned flap extensions on their front edges.

Laminated Container Closure, W. A. Smith (to F. N. Burt Co., Buffalo, N. Y.). U. S. 2,403,131, July 2. In a closure for a container opening, a closure disk adapted to extend over the container opening to provide closing therefor, a plurality of flat rings having upper and lower contacting surfaces adhesively attached together and to said closure disk to form a laminated closure structure.

Pouring Carton and Blank, J. J. Sullivan, Arlington, Mass. (One-half to L. L. Witter, Boston, Mass.) U. S. 2,403,138, July 2. A carton perforated adjacent to a corner thereof along a line extending across the junction of two faces radiating from said corner and obliquely across said two faces to two margins thereof radiating from said corner, said perforations across the junction and across said two faces forming a corner closure.

Bag Filling Apparatus, R. J. Williams and A. S. Littlefield (to Bemis Bro. Bag Co., St. Louis, Mo.). U. S. 2,403,149, July 2. Bag filling apparatus comprising an operatively fixed slide platform sloping up from a datum toward an article-receiving point, an operatively fixed chute mounted on said platform near its upper end and means for positioning bag, spreader for opening bag mouths, and means for retracting bags equipped with automatic clutch.

Collar Can Collar and Mounting Therefor, W. F. Punte (to Continental Can Co., New York, N. Y.). U. S. 2,403,192, July 2. A sheet metal container with upper end closure seamed onto the body portion, said body portion having an inwardly directed bead adjacent its upper end and being scored above said bead to provide a tear strip, and collar snugly fitting within the body, and having main body extending above and below tear strip.

Closure, W. J. Keith (to Keith-Peabody, Inc., Brookline, Mass.). U. S. 2,403,287, July 2. A closure for a container comprising a top disc formed of fibrous sheet material, a side wall structure extending about the peripheral portion of the top disc and secured thereto and having an inturned flange underlying the peripheral portion of the top disc, and equipped with liner disc extending inner face of top disc beneath the flange.

Container, R. O. Pickin, Los Angeles, Calif. U. S. 2,403,299, July 2. In a container, a container body, a stopper comprising a cap portion and a tube portion, the tube portion extending downwardly from the cap and being closed at both ends providing a chamber in the stopper, the tube being supplied with an opening through the side allowing access to the chamber and forming a liquid holding well when the tube and container are in vertical position.

Scoring Roll, D. E. Kelley (to Kaw-O'Hara Envelope Co., Chicago, Ill.). U. S. 2,403,377, July 2. A scoring roll equipped with rotatable shaft, a pair of

It's SYLVANIA* for Cellophane!

to protect tobacco

...and beans

WHEN YOU think of protection, think of Sylvania Cellophane. For this versatile packaging material is more than an attractive wrap. Its important functional qualities make it indispensable protection for perishable products such as every type of tobacco, confectionery, baked goods or frozen foods. Sylvania Cellophane is air-, dust- and moisture-proof... assures retention of flavor, freshness and aroma.

AND DON'T FORGET, Sylvania is an improved cellophane. Today it offers even better protection than ever before to an extensive list of packaged products.

...and marshmallow creams!

SYLVANIA CELLOPHANE

Made only by SYLVANIA INDUSTRIAL Corporation

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 122 E. 42nd St., New York 17, N.Y. ★ *Plant and Principal Office:* Fredericksburg, Va.

SYLVANIA CELLOPHANE

*Reg. Trade Mark

collars adjustably mounted thereon, a bar connecting said collars and a lower score blade mounted on said bar, with circular disc-like score blades mounted in spaced apart relation to rotate concentrically with said shaft.

Method and Apparatus for Producing Designed Papers, E. W. Samson (to Hammermill Paper Co., Erie, Pa.). U. S. 2,403,461, July 9. A method of producing a two-tone design on paper which comprises subjecting the paper to a combined pressing and rubbing action at selected points conforming with the desired design.

Container Closure, E. M. Enkur (to Crown Cork & Seal Co., Inc., Baltimore, Md.). U. S. 2,403,511, July 9. A snap-on and pry-off cap including a top and a resilient substantially cylindrical skirt depending from said top and including a continuous curled bottom edge skirt being provided with lugs.

Storage Tank for Oils and Other Liquids, W. G. Laird, Pleasantville, N. Y. U. S. 2,403,604, July 9. An apparatus for holding liquids which comprises a upright open-topped cylindrical tank capable of withstanding the hydrostatic head of liquid stored therein, a buoyant floatable sheet metal deck within said tank adapted to be floated by the liquid in the tank in a substantially horizontal position under normal conditions.

Hinged Cover Container, M. I. Williamson and H. A. Carruth (to National Folding Box Co., New Haven, Conn.). U. S. 2,403,698, July 9. An improved hinged cover container comprising, a box part having enclosing side panels and an open end, a cover part for said open end having an end wall panel hingedly connected to one of the box side panels and connected cover side panels joined to said end wall panel adapted to telescope over other adjacent box side panels.

Holder for Cards and Photographs, C. F. Zuber (to Acme Visible Records, Inc., Chicago, Ill.). U. S. 2,403,701, July 9. A holder for inserts such as cards, photographs and the like comprising a body, insert engaging means provided on said body, one of said insert engaging means comprising an inwardly disposed tongue formed on said body for receiving the adjacent corners of a pair of inserts mounted upon one side of the holder.

Bottle Cap, C. J. Malm and G. J. Clarke (to Eastman Kodak Co., Rochester, N. Y.). U. S. 2,403,734, July 9. A container closure cap adapted to shrink by loss of solvents comprising an inner layer of polyvinyl alcohol, and an outer layer composed of cellulose acetate butyrate.

Mounting and Display Cards, A. R. Nutt (to Forest City Products, Inc., Cleveland, Ohio). U. S. 2,403,746, July 9. The combination with a plurality of oval corn pads, of an elongated rectangular card having parallel score lines extending the full length thereof and spaced apart a distance greater than the length of the pads, and a pair of elongated flaps extending lengthwise of the card for gripping the pads, each flap being attached to the face of the card.

Sewed Closure, R. E. Read (to Union Bag & Paper Corp., New York, N. Y.). U. S. 2,403,756, July 9. A paper bag comprising a tube having a collapsed end, a strip of material folded over said collapsed tube end, a reinforcing strip overlying said folded overstrip, stitching through said reinforcing strip, folded over strip and collapsed tube end, and a portion of said reinforcing strip folded and adhesively secured over the stitching.

Collar Can Collar Mounting, J. Coyle and W. F. Punte (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,403,788, July 9. In a sheet metal container, a body portion, an upper end closure seamed onto the body portion, said body portion having an outwardly directed bead adjacent its upper end, the body being between said bead, and closure scored to provide a tear strip.

Drill Case, M. D. Nissenbau (to General Hardware Mfg. Co., Inc., New York, N. Y.). U. S. 2,403,825, July 9. In a drill case, a box member having a wall opening, a box cover member hinged to the box member on an axis near said opening, a drill tray positioned between the box and cover pivotally mounted at its lower end about said axis and a drill shifting tray member extending from the cover, and means for swinging same in an acute angle.

Container Closure and Method of Closing Containers, F. Gilbert, Jr., Olmsted Falls, Ohio. U. S. 2,403,855, July 9. As an article of manufacture, a stamped paper cap comprised of an integral bottom portion and a flange portion, a reinforcing sheet of corrugated paper comprised of a central corrugated sheet and cover sheets, said reinforcing sheet being located within said cap and covering the inner surface of bottom portion, and a solid impregnating agent completely filling the voids of reinforcing sheet.

Polygonal Separable Section Container, A. P. D. Belanger, Alton, Ill. U. S. 2,403,901, July 16. A polygon container formed of sheet material and having at least six substantially straight sides and having blind openings leading inwardly at the corners provided by inwardly tucked outwardly open folds into which a cutting blade can be inserted for separating the container sections.

Spraying Machine, H. J. Paynter (to American Can Co., New York, N. Y.). U. S. 2,403,994, July 16. A machine for spraying a coating material on the interior surface of an irregular shaped tubular can body.

Method of Making Fibre Container Bodies, J. F. Peters (to American Can Co., New York, N. Y.). U. S. 2,403,995, July 16. A method of producing tubular fibre container bodies having marginal edge portions embodied in an adhesively secured side seam, which comprises forming a fibre body blank into substantially tubular shape to produce a partially formed container body, and successively feeding same through preheating, adhesive applying and seam forming zones.

Controlled Ventilated Container, I. Hille (to The Lawrence Paper Co., Lawrence, Kansas). U. S. 2,404,065, July 16. An egg case comprising a container having bottom, side and end walls, said end walls having ventilation openings therein and a plurality of liners removably mounted in the container.

Cap Remover and Support Therefor, M. H. Hill, Rochester, N. Y. U. S. 2,404,066, July 16. An article of manufacture comprising a series of crown cap removers, each cap remover including a loop at one of its ends and a spaced pair of legs at its other end, each of said legs being formed from a piece of wire doubled back on itself, each remover projecting in parallel relation.

Container and Closure Therefor, J. D. Hill (to The Lawrence Paper Co., Lawrence, Kansas). U. S. 2,404,067, July 16. A container body having bottom, side and end walls, flaps extending inwardly and downwardly on the end walls a detachable cover for the container body with downward flaps on the ends of the cover for insertion into the interior of the container body.

Bottle Carrier, J. N. Ice (to Riverside Steel Co., Wheeling, W. Va.). U. S. 2,404,133, July 16. A bottle carrier comprising a body, a separable handle for the body, means for assembling the handle and body and simultaneously locking the handle and body to prevent relative sliding movement.

Re-inforcing Liner and Package for Cigarettes and Other Articles, R. S. Reynolds (to Reynolds Metals Co., Richmond, Va.). U. S. 2,404,312, July 16. A reinforcing shell and package for cigarettes and other articles comprising: a unitary sheet of flexible material cut, scored and folded to form an unbroken major face, a second major face constructed consisting of two sets of broken walls, one set extending transversely of the other and the sets lying in contact; side walls connecting the first set to the unbroken major face; top and bottom walls connecting the unbroken major face with the second set, side wings carried by the said second set and overlying the side walls at the central area of said side walls only, and retractible closure means.

Ampulla-Syringe, A. Sack, Basel, Switzerland. U. S. 2,404,316, July 16. An ampulla-syringe comprising a liquid-container having a body of transparent compressible material, a rigid hollow head part thereon and subject to pressure upon compression of said body.

Container, T. R. Smith (to The Maytag Co., Newton, Iowa). U. S. 2,404,409, July 23. In a container including a receptacle member and a closure member having overlapping parts, a substantially V-shaped groove provided in one of the parts and a substantially wedge-shaped resilient sealing ring carried in the groove and having a sealing face for sealing contact with the other part, said sealing ring is free to pivot within the groove and effectively seal the members against leakage.

ROUND PEGS in ROUND HOLES

and SQUARE *Pegs in* SQUARE *Holes, too!*

We do not undertake *every* job offered to us . . . because we don't aspire to become square pegs in round holes—or vice versa.

When we DO accept responsibility for production, you can be sure that the promise of satisfaction fits perfectly with our capacity and skill.

Our experience in Plastics dates back to World War I, and our growth has kept pace with the swift development in that fertile field. It is also interesting to note that the businesses we serve have *also* expanded—and turn to us for their Quality production.

If you want Quality and Volume in
EXTRUSION and INJECTION MOLDINGS

write for details to
MOLDING DIVISION of—

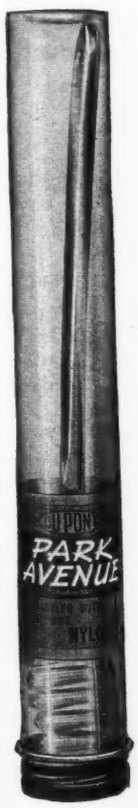
Clearsite*

* Reg. U. S. Pat. Off.

Containers are PLASTIC

★ SEAMLESS
★ SHATTERPROOF
★ FEATHERLITE
★ COLORFUL

MORE EYE-APPEAL FOR GREATER BUY-APPEAL!



CLEARSITE enhances the merchandising of sanitary goods, drugs, toys, machine parts, tools, sporting goods and a host of products that deserve *better* appearance and protection.

Label-imprinting is part of the manufacturing process.

CLEARSITE—the *Safety Base Plastic*

Write to CONTAINER DIVISION

CELLUPLASTIC CORP.

CELLUPLASTIC CORPORATION

PLASTIC CONTAINERS
AND
PLASTIC PRODUCTS

55 AVENUE L NEWARK 5, N. J.

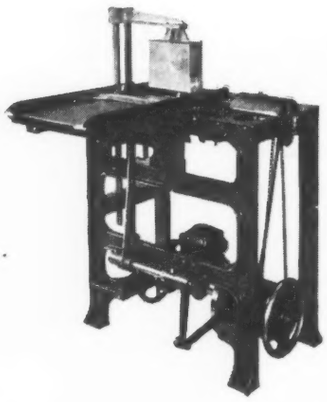
NEW YORK OFFICE—630 FIFTH AVENUE — WEST COAST CONTAINER SERVICE COMPANY, LOS ANGELES 27 CAL

REDUCE
THE COST OF CARTON PACKAGING

Today more than ever, manufacturers are faced with the need for cutting the production cost of their product. In many cases one of the cost items is carton packaging.

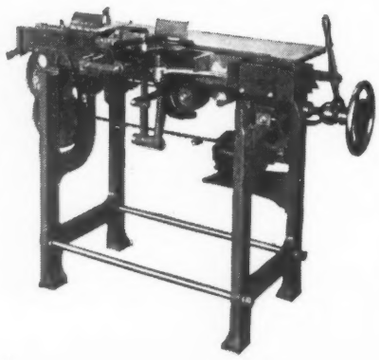
If your plant still sets up and closes cartons by expensive hand methods, it will pay you to investigate the many advantages of using PETERS automatic and semi-automatic carton setup and closing units. Carton users everywhere are finding that these machines are increasing their production, saving labor and building greater profits.

Send us samples of the cartons you are using. We will gladly make recommendations for your specific requirements.



This PETERS JUNIOR CARTON FORMING & LINING MACHINE sets up 35–40 cartons per minute, requiring only one operator. After the cartons are set up, they drop onto a conveyor where they are carried to be filled. If you desire to handle several carton sizes, the machine can be made adjustable.

This PETERS JUNIOR CARTON FOLDING & CLOSING MACHINE closes 35–40 cartons per minute, requiring no operator. After cartons are filled, they enter machine on conveyor and are automatically closed. Can also be made adjustable to handle several different size cartons.



PETERS MACHINERY COMPANY
GENERAL OFFICE AND FACTORY
4700 RAVENSWOOD AVENUE, CHICAGO, ILL.

Polyethylene . . .

(*Continued from page 134*) easily. It is unusually stable at extrusion temperatures and will not readily decompose. Insofar as we have observed, there is no tendency to corrode the metal linings of the machine and dies. For these reasons among others, it has been found by custom extruders to be one of the most satisfactory of all extrusion compounds.

Commercial manufacturers are now extruding polythene in the forms of continuous flat sheeting up to 48 in. in width, and continuously extruded tubing with wall thicknesses 1.5 mils and up in flat width of 48 in. (i.e., with a periphery of 96).

An interesting process has been used in England for molding polythene in extremely large sections. A large die is clamped on the front of an extrusion machine and filled by running the extrusion screw. With the screw still running, progressive cooling is begun at the section of the die furthest from the machine. When the entire die has been properly cooled, the screw is stopped and the die removed and opened. Transformer sections several feet long have been produced in this manner and it is not inconceivable that large containers, in the form of kegs or barrels, for example, might be produced in like manner. Such containers would be easily cleaned and re-used. They would be light in weight and not easily broken by impact.

Polythene film can be heat-sealed in a number of ways. Because its electrical losses are negligible, it cannot be sealed by so-called "electronic" sealers, which depend upon high-frequency heating.

A $^1/_{16}$-in. edge protruding from metal jaws can be sealed with a small alcohol flame. The band-type sealer, which passes the joint first through a heated section and then between chilled rolls, accomplishes good sealing with polythene film. Clamping jaws will seal polythene, but there may be a tendency for the film to stick to them. This can be avoided if the jaws are faced with a tape of "Teflon" tetrafluoroethylene polymer. Also, heat-resisting lacquers are available which may be used to insulate the jaws and prevent sticking.

No good cement is known for polythene, although some rubber-type cements have been used with fair success. Compositions which show promise as adhesives are under intensive investigation.

Polythene has been stitched mechanically on high speed sewing machines.

Polythene film has been printed with plain and variegated labels. Some of the modified compositions show better printing properties than the uncompounded polythene itself. The plastic has been embossed and is capable of accepting other similar surface treatments.

Polythene sheeting has been swaged, and drawn over forms. It has been suggested that liners for drums, bags and cartons be made in this manner.

Heavier sections of the plastic can be sawed, drilled, routed, turned, etc., on ordinary wood- or metal-work-

BEMIS complete packaging service

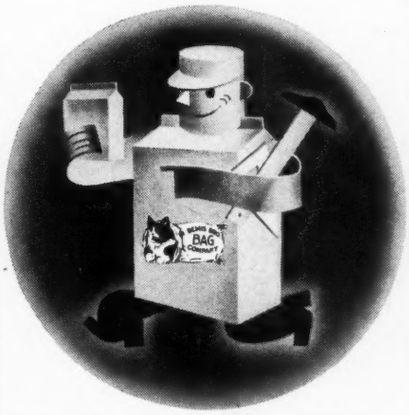
GIVES YOU SHIPPING AND SALES ADVANTAGES AT LOW COST

Bemis bags and services fill a wide variety of packaging needs, for a wide variety of products. On new or established products—either consumer or industrial—remember Bemis for:

1. Outstanding facilities for production, brand printing, and servicing.
2. Consultation service on package design.
3. Engineering service on filling, closing, and handling operations.

Here are three of the ways Bemis is serving industry today!

DELTASEAL BAGS—
Attractive and popular paper consumer-packages which retailers feature in counter and floor displays. Housewives like the easy-pouring, self-closing spout. Deltaseal Bags are used for packaging flour, rice, sugar, salt and many similar powdered or granular products.



PAPER BAG SPECIALTIES—
Tailor-made bags for irregular or odd-shaped objects, and unusual shipping conditions. Bemis analyzes your problem and makes recommendations. Mattresses, cans, coffins and a variety of other out-of-the-ordinary products are now packed in Bemis Bags.

RESEARCH—
To determine the best handling of your packaging problems, Bemis Shipping Research Laboratory studies your products. Laboratory and field tests are conducted. Safety, practicability, economy, appearance are all considered to make sure the bag selected will do the job.

FOR THE BEST, LOW-COST ANSWER TO PACKAGING PROBLEMS CALL THE BEMIS SPECIALIST
1054 S. Vandeventer, St. Louis, Mo.

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Charlotte • Chicago • Denver • Detroit
E. Pepperell, Mass. • Houston • Indianapolis
Kansas City • Los Angeles • Louisville
Memphis • Minneapolis • Mobile

New Orleans • New York City • Norfolk
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26 YEARS
OF KNOW HOW

Specializing in PRECISION
COMPRESSION, TRANSFER
and INJECTION MOLDING
also High Pressure Die Casting
of Zinc and Aluminum

PLASTIC & DIE CAST PRODUCTS CORP.
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Roy L. Peat, President Established 1920

ing tools. Its machining properties are excellent if relatively low speeds are used, and adequate provision is made for the dissipation of heat.

Since 1942, when active commercial development of polythene was started in this country, the price of the molding or extrusion powder has dropped from $1 to 53 cents per pound. Further substantial reductions in price may be expected within the next few years if the market for polythene expands in accordance with present forecasts so that operating costs can be reduced through increased volume of production. If sufficiently large volume is realized, polythene should reach a potential cost so low as to make it easily competitive in price with the cheapest flexible thermoplastics which are commercially known today and which are capable of being converted into the form of films.

In any consideration of price the low specific gravity (large area factor) of polythene is a consideration.

As previously stated, developments toward applications other than for wire and cable insulation were retarded during the war by the urgency of the military need for polythene and its extraordinary dielectric properties. Now that new developments can proceed, the work that lies ahead must be recognized.

Polythene packaging developments to date have been aimed principally toward uses of a functional nature, although a large number of items are being manufactured for merchandising outlets. One of the chief problems confronting us is the improvement of the decorative possibilities of this material for consumer use.

It is primarily the responsibility of the raw material manufacturer to develop new useful forms of polythene which will serve the needs of industry. Work is progressing on new compositions which will enhance the packaging possibilities of polythene.

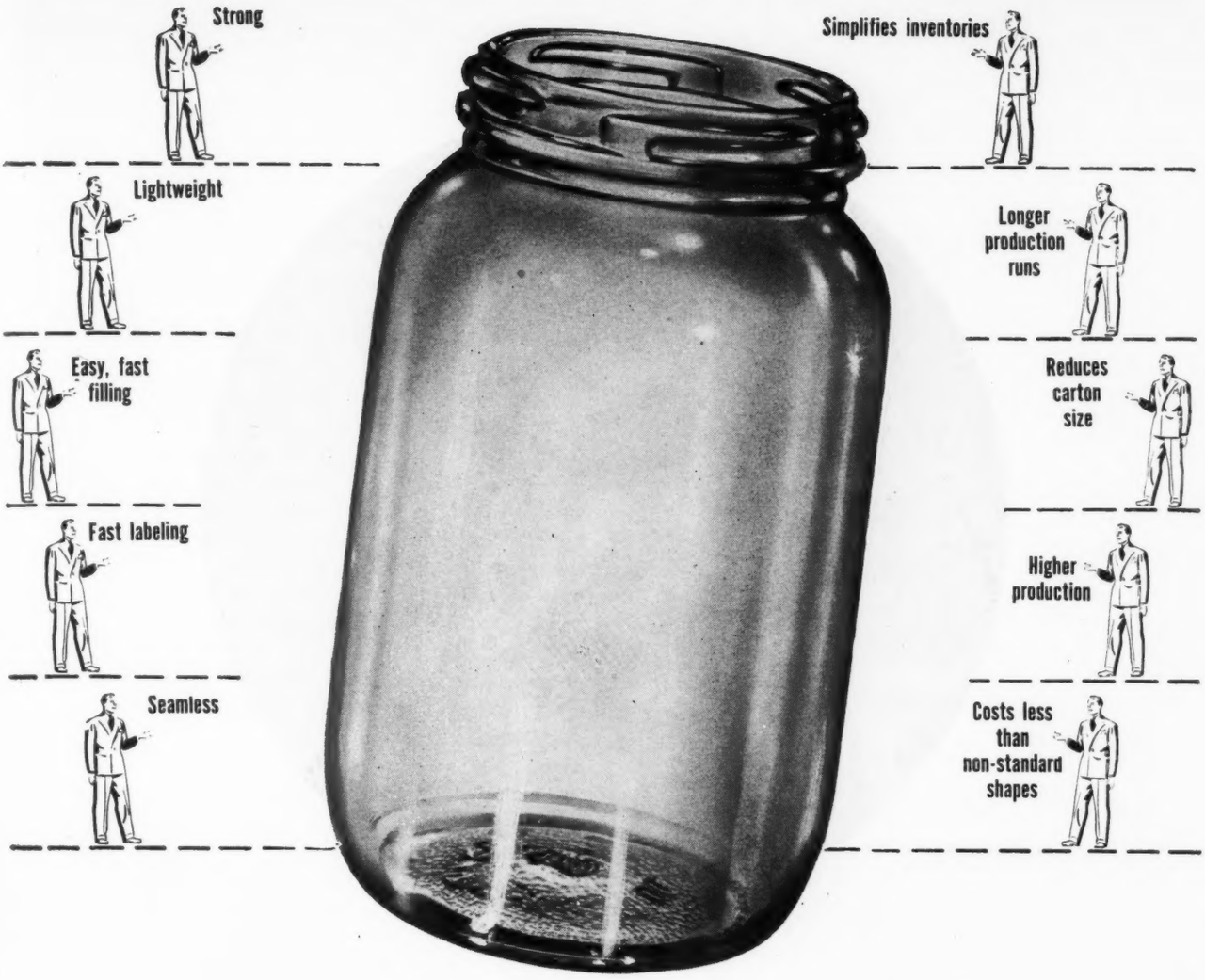
Intensive investigation of the lamination of polythene to other materials is being carried on in a number of packaging research laboratories. Calendering processes and the improvement of extrusion methods are also being studied.

Methods of printing and labeling are being investigated and reasonable success has rewarded efforts toward these ends. Still further work is necessary.

Cements for polythene must be found which will permit the packaging of materials such as explosives, which will not tolerate heat sealing. A thorough study of the blending of polythene with paraffin wax must be undertaken. Initial results have shown sufficient promise to warrant more exhaustive investigation.

There is a prime need for development in machinery for wrapping and packaging with polythene film. It is possible that these aims can be obtained with proper modification of present equipment.

Summarizing then, here is a new versatile plastic of worth already proved, ready for further development as a packaging material. It offers the packaging industry such a diversity of outstanding properties and points to such a wide range of utility that it warrants the attention of fabricators, converters and users in every phase of merchandising and industry.



Anchorglass Plain Round Jars

bring you 10 important advantages

THE smooth, cylindrical shape of the Anchorglass standard plain round jar brings you these 10 advantages—every one of which can be directly translated into terms of *more economical operations* and *increased profits.* Read them and you'll want to use the Anchorglass standard plain round jar in your operations.

1. Greater strength through more uniform distribution of glass. **2.** Light weight—shipping costs materially reduced. **3.** Wide mouth means easy, *fast* filling. **4.** Round shape means simplified, fast label application. **5.** Seamless and chemically inert. **6.** Simplifies jar inventories—one shape—small number of sizes needed. **7.** Longer runs without changing lines—standard shape reduces downtime for changeovers. **8.** Greater production—no odd shapes to complicate production line. **9.** Reduces shipping carton size—and cost—no odd shapes to waste space. **10.** Costs less than non-standard designs.

The adaptability of Anchorglass plain round jars to many different products can also mean more money to you. And this standard jar offers great merchandising and display opportunities for retailers. Finally, the consumer likes it for its convenience, ease of handling and access to product, and because she can see what she buys.

Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

Like a breath of Spring, these modern plastic containers can give new life to your product and make sales grow.

Light as a feather, yet strong, rigid, unbreakable. LUSTEROID protects as it displays through its crystal-clear walls. It's economical, too, because it can be printed and thus save labeling costs. Its light weight reduces packing and shipping expense.

All colors of the rainbow . . . clear or opaque. Sizes from ¼" to 1¼" in diameter. Lengths up to 6". Cork, slip-on or screw-cap closures. Write for details.

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Formerly Lusteroid Division of Sillcocks-Miller Company

Office and Factory
10 W. PARKER AVENUE, MAPLEWOOD, N. J.
MAILING ADDRESS: SOUTH ORANGE, N. J.

What size shippers?

(*Continued from page 97*) and the suggested number of units per case. In a few cases, the recommended number was as little as a half dozen; in the great majority of cases the recommendation was for a single dozen. Gallon sizes, most of the wholesalers thought, should be packed separately, and half gross lots should be reduced to two- and three-dozen cases. Manufacturers whose products are not mentioned specifically by name can draw conclusions by comparison with goods similar to their own.

Some manufacturers have already made use of this study, and are planning or have launched new packagings that more closely fit the retailers' needs.

Lamont, Corliss & Co., makers of Pond's Creams, early in June issued an announcement to the trade, giving detailed information regarding the case and inner carton contents for their entire line. Other companies who have been quick to see the advantages that would result are The Lambert Pharmacal Co., makers of Listerine; The Mennen Co., manufacturers of toilet preparations; and Lehn and Fink. The last named concern, July 1st, reduced case sizes of Pebeco tooth preparations, Hinds Cream and Lotion, and Lysol. They even scrapped a supply of too-large shipping cases in their program of re-packaging, but they feel that the economies and increased convenience will more than compensate. Procter & Gamble announced June 1st that they were returning to their prewar packaging of Drene and Teel, and the N.W.D.A. looks for a wider acceptance of the principle on the part of manufacturers that sell through drug channels, subject only to delays caused by the continuing paper shortage.

Thermoplastic labeler

(*Continued from page 129*) drying. Going through the drying oven would activiate the thermoplastic prematurely. Instead of lacquer, spirit varnish is applied by means of a printing plate. This process is accomplished at ordinary temperatures, and the resulting surface appears to be equally satisfactory to label users.

Dry labeling is regarded by its advocates as holding considerable promise for the future. Liquid glue, they point out, is subject to variations in formula, and is very much affected by conditions of temperature and humidity, which likewise have an effect on the texture, stretch and shrink of the paper stock on which it is used. When and if labels are printed on ordinary gummed paper, they are prone to curl and block, whereas—so far as present experience has gone—labels on thermoplastic coated paper retain their flatness. No water is required, although the presence of water either on label or bottle will not prevent adhesion. The coating is laboratory controlled and with-

Let these IPI Developments help you
PRINT FINER PACKAGES

USE SHARPER PRINTING ANILOX INKS

Anilox* 100 per cent pigment inks for aniline and Anilox type presses, are easy to use, low in cost, eliminate slip-sheeting and produce better fastness to light and sharper, tack-free reproductions on plain and coated papers, board, glassine, acetate, foil, and other materials—even the more highly plasticized grades of cellophane.

Inks containing dyes often bleed into the newer types of cellophane, or do not dry tack-free, resulting in sticking or offsetting on sheets, bags, or roll.

NEW PLASTIC AND GLASS INKS AVAILABLE

for printing by dry offset or silk screen on the various shapes and types of plastic and glass containers. Inks are developed to resist alcohol, greases, and other deteriorants to meet the conditions under which the plastic and glassware are to be used.

FOR COLORING PLASTICS

IPI has developed a dip solution for coloring thermoplastic materials, including containers. Faster, easier! Can be used at room temperatures.

VAPORIN* INKS SPEED BAG PRINTING

Dry instantly, retain their body throughout press run. Eliminate slip-sheeting . . . For bag printing where high press speeds are essential.

VAPOSET* INKS FOR FOOD PACKAGES

Can be put through waxing machines two hours after printing . . . Available in a full range of colors. *The closest to an odorless printing ink yet achieved.* Sets instantly on application of steam or completely vaporized water. Superior sealing qualities.

FOR OFFSET LITHOGRAPHY

Improved offset inks, a new litho drying stimulator, offset blankets, and a complete line of lithographic supplies.

IPI COLOR CONTROL SERVICE

A special service developed by IPI to establish precise color standards through which package colors can be matched and maintained with scientific accuracy. Saves you money, time, and trouble.

Package printers have long recognized International Printing Ink's technical skill and experience in the development of new materials and methods for the packaging field. Why not let us put that experience to work on your problem? Customers say, "It pays to keep in touch with IPI."

*Reg. U. S. Pat. Off.

INTERNATIONAL PRINTING INK

"KEEP IN TOUCH WITH IPI"

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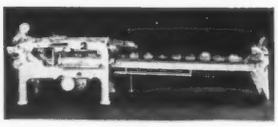
The "OLIVER" wraps them all!

The 12-ft. automatic infeed conveyor simplifies assembly work of products in cartons, trays, U-boards or flat cards. Its wide stainless steel tables are also used as the end of the production line to apply final touches to products just before wrapping them.

The Machine for Today . . .

Today management is asking, *How can the current trend of increased costs be met?* Generally, it is agreed, the solution is to bring about economies in lowering the unit cost of production. Specifically, when considering the packaging department, this means you must reduce the cost of wrapping materials per package, simplify the labelling of packages, minimize labor costs, and insure fast and smooth wrapping without costly interruptions for changes. *The "Oliver" is the solution* . . . its versatility and several automatic features can produce all these economies for you. *Get all the* facts today.



The "Oliver" Wrapping Machine has automatic Cardboard Folder and Feeder. It is quickly adjusted. Handles widest range of sizes. Automatic Labeller uses rolls of diecut thermoplastic labels (printed by "Oliver"). Automatic Label Imprinter. Photo-electric registration of printed wrappers. Made in 5 different size ranges.

OLIVER MACHINERY COMPANY, GRAND RAPIDS, 2, MICH.

"Oliver" Wrapping Machine

WITH "OLIVER" AUTOMATIC ROLL-TYPE LABELLING SYSTEM

out variation, it is claimed, so that the unvarying action of the machine may be depended on for uniformity of label application. Wet-glue operations require considerable time to prepare glues and mechanisms—the practice in one well-known brewery is to put a man on the "readying" job two full hours before the day's operations begin. In addition, keeping the gluing devices in proper condition during a run, and cleaning up properly afterwards, are other time consuming but necessary operations.

Thermoplastic labels have a permanence of adhesion which is very important for some products. They will withstand the action of refrigeration, as moisture or ordinary washing will not remove them. Some tests have been made with a dilute caustic solution, however, and indications are that removal is easy by that means, although additional tests must be made before definite claims are made on that point.

As a matter of fact, the machine manufacturer is very guarded in making statements about this development. Pilot runs have been signally successful, and it is believed that commercial production will soon be a reality. The modification of the stock model labeling machine is but a forerunner of a larger machine built especially for applying thermoplastic labels at speeds as high as 300 per minute. The blueprints for this new machine have been completed, and production now hangs on two things: (1) Final elimination of all "bugs" in the new development, and (2) return of normal shop conditions permitting the manufacture of the new machine.

CREDITS: *Companies participating in the development: New Jersey Machine Corp., Hoboken, N. J.; Nashua Gummed & Coated Paper Co., Nashua, N. H.; The Marathon Corp., Menasha, Wis.; Milprint, Inc., Milwaukee, Wis., Bristol-Myers Co. Hillside, N. J., and The Lord Baltimore Press, Baltimore, Md.*

Micro-organisms in papers

(*Continued from page 146*) the above operations can be effective in maintaining the low bacterial content, particularly when disinfectants are used judiciously.

As the wet sheet enters the drier section, it may have a high bacterial content. The studies reported leave no doubt concerning the lethal effect of drier rolls upon bacteria. Non-spore-forming species are destroyed completely, whereas spore-forming ones are only greatly reduced in numbers.

In addition to the above factors, four others not absolutely necessary to papermaking, can be used to maintain bacteriological control in the mill system. They are: (*a*) good housekeeping, (*b*) chlorination (with or without ammonia) of the untreated fresh water, (*c*) chlorination (with or without ammonia) of recirculated white water, and (*d*) the addition of other suitable chemicals at the beater or elsewhere. Probably the most significant of these is the first.

It has been shown that paper leaving the paper machine may vary in bacterial content from being prac-

A WIRZ Customer wins in recent Veterans' preference survey

Palmolive and Colgate Shaving Creams came out first and second respectively in the recent drug products survey of Veterans of World War II conducted by the American Legion Magazine. Palmolive and Colgate polled 17.91% and 16.58% of votes for a list of 44 shaving creams. We congratulate the manufacturer of these two fine shaving creams, Colgate-Palmolive-Peet Company, a customer of ours for whom we have been privileged to supply WIRZ Collapsible Metal Tubes and Molded Caps for many, many years.

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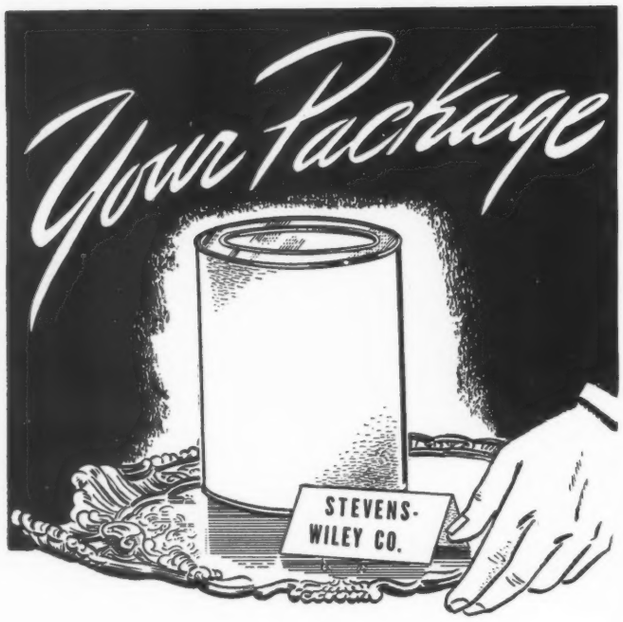

ON A SILVER PLATTER

Your product, in your container, physically packaged and labeled, comes back to you virtually "on a silver platter"—there in a few words is the story of the Stevens-Wiley custom packaging service. Complete, comprehensive, versatile . . . Stevens-Wiley service embraces any phase or every phase of dry packaging. Geared to the biggest jobs, our modern equipment can handle the little ones economically, too. Regardless of what your packaging problem is, why not let the Stevens-Wiley engineers plan an efficient production schedule that will dove-tail with your own equipment and facilities.

WRITE OR CALL FOR ADDITIONAL INFORMATION WITHOUT OBLIGATION

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tically sterile to having hundreds of thousands of bacteria per gram, depending upon mill and grade.

The sanitary significance of bacteria in paper is considered as being of little or no importance for three reasons. First, the bacteria present are aerobic spore-forming species, not non-spore-forming species to which most of the pathogenic ones belong. Second, no coliform bacteria have been found in paper and this further confirms the absence of pathogenic bacteria. Third, the excellent use record for paper for foods offers indisputable evidence of its sanitary properties.

References

1. Anderson, G. W., The Present Epidemiological Basis of Environmental Sanitation, *Am. J. Pub. Health*, *33*, 113–119 (1943).
2. Tanner, F. W., Wheaton, E., and Ball, C. O., Microbiology of Paper and Paperboard for Use in the Food Industry, *Am. J. Pub. Health*, *30*, 256–266 (1940).
3. Appling, J. W., and Shema, B. F., The Lethal Effect of Drier Rolls upon Bacteria, *Paper Trade J.*, *114*, No. 13, 40–44 (1942).
4. Appling, J. W., The Bacteriological Examination of Paper, *Paper Trade J.*, *120*, No. 6, 34–40 (1945).
5. Sanborn, J. R., and Gillotte, R. A., Microbiological Flora of Pulp, Paper and Paperboard, *J. Bact.*, *38*, 679–680 (1939).
6. Tanner, F. W., Bacteriology in the Paper Industry, *J. Bact.*, *40*, 155 (1940).
7. Smith, O. A., Microflora of Felts and Slimes, *Paper Trade J.*, *113*, No. 16, 29–31 (1941).
8. Heist, E., and Sanborn, J. R., Thermophilic Bacteria Isolated from Paper Pulp and Paperboard, *J. Bact.*, *43*, 113 (1942).
9. Tanner, F. W., The Present Status of the Paper Milk Container, *J. Milk Tech.*, 2, No. 1, 4–15 (1939).
10. U. S. Public Health Service, *Federal Security Agency*, Milk Ordinance and Code, *Public Health Bull. No. 220* (1940) 160 pp.
11. Stark, C. N., Sanitary Regulations for Controlling the Production of Paper Containers for Milk, 14th Annual Report, N. Y. State Assn. Dairy & Milk Inspectors, 1940, 279–288; *J. Milk Tech.*, *4*, 200–205 (1941).
12. Hoy, W. A., Routine Bacteriological Examination of Milk Cartons, *Proc. Soc. Agric. Bact.* (Gt. Brit.), 1941, 48; *Biol. Abstracts*, *16*, 20772.
13. Rice, J. W., Controlling the Bacterial Content of the Fiber Bottle Cap, Pa. Assn. Dairy Sanit., *Annual Report 15*, 98–105 (1939).
14. American Public Health Assn., Standard Methods for the Examination of Water and Sewage, 8th ed., 1936.
15. Public Health Reports, *58*, 69–111 (1943).
16. Baker, C. M., Significance of Bacterial Control in Paper, *Paper Trade J.*, *110*, No. 16, 33–35 (1940).
17. Anon., Distortion of the Sanitary Problem, *Fibre Containers*, *25*, No. 6, 60, 69 (1940).
18. Anon., The Sanitation of Paperboard, *Am. Box Maker*, *30*, No. 11, 15, 22 (1940); *Shears*, *58*, No. 570, 47 (1940).
19. Prucha, M. J., and Tracy, P. H., Bacteriological and Practical Aspects of Paper Containers for Milk, *Univ. Ill. Agr. Expt. Sta. Bull.* No. 495, 415–472 (1943).

The candy industry

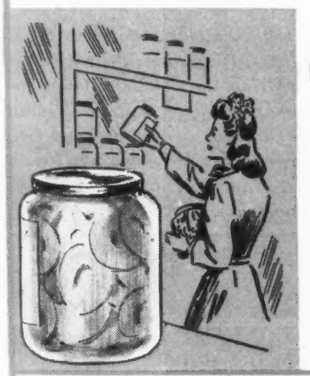
(*Continued from page 110*) machine adheres the tape at an angle with heat and additional wax to the edge of the wrapper so that the tape extends beyond the edge of the wrapper. The machine then transfers the eleven fruit drops with wrapper and tape into wrapping wheels where it is wound around the assembly of candy twice with lap. The lap of the wrapper is heat sealed. The protruding ends of the wrapper are folded down and sealed. Next a foil wrapper is cut from a roll and the paper-wrapped package is transferred into a second wrapping mechanism that applies the foil wrapper with a lap. Before ends are folded down a small amount of paraffin is injected at each end of the package. The ends of foil are folded down and sealed. Next a band is fed from a magazine and is placed around the foil-wrapped package, which is then ejected from the machine. The tape is not arranged in the package for tearing off the end of the package, but in such a manner that it only opens the folds so that the consumer can open it, remove a tablet and fold the wrapper back.

Small cartons make economical, convenient and neat packages for many free flowing confections. Cartoners for performing the filling of such containers produce completed packages at the rate of 120 to 140 per

SURVEYS PROVE...
GLASS CONTAINERS PREFERRED 2 to 1

Glass containers boost sales! That's been proved! A renowned public opinion analyst* recently made a national survey of women's packaging preferences . . . established a preference of over 2 to 1 for products** packed in the modern container—the glass package!

Here are some of the reasons why more and more women prefer to buy glass-packed products:



VISIBILITY

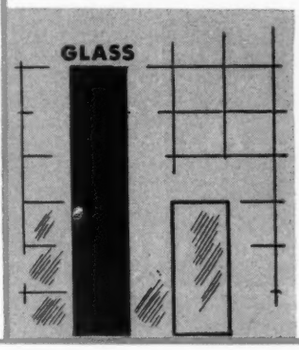
A glass container invites product inspection. Its color, amount and condition are on display. Luscious, glassed fruits catch the eye of a customer who is "looking for a delicious dessert!"

PROTECTION

Sanitary glass containers do not affect the flavor, aroma. Coffee is ultra vacuum-packed in the new Duraglas Ultra-Vac jar. Flexible cap seals in freshness—reseals it in between uses.

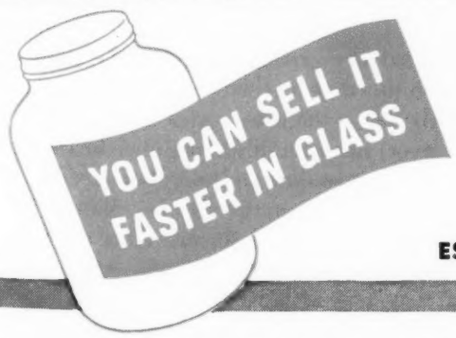
CONVENIENCE

Easy-to-keep-clean glass containers are preferred for household products, too! They are quickly opened—show how much is on hand. Women prefer glass-packed furniture polish, 3 to 1!



PREFERENCE

Alert young women who are just now joining the ranks of homemakers register an emphatic 3 to 1 preference for products packed in glass. Their vote indicates the growing swing to glass!



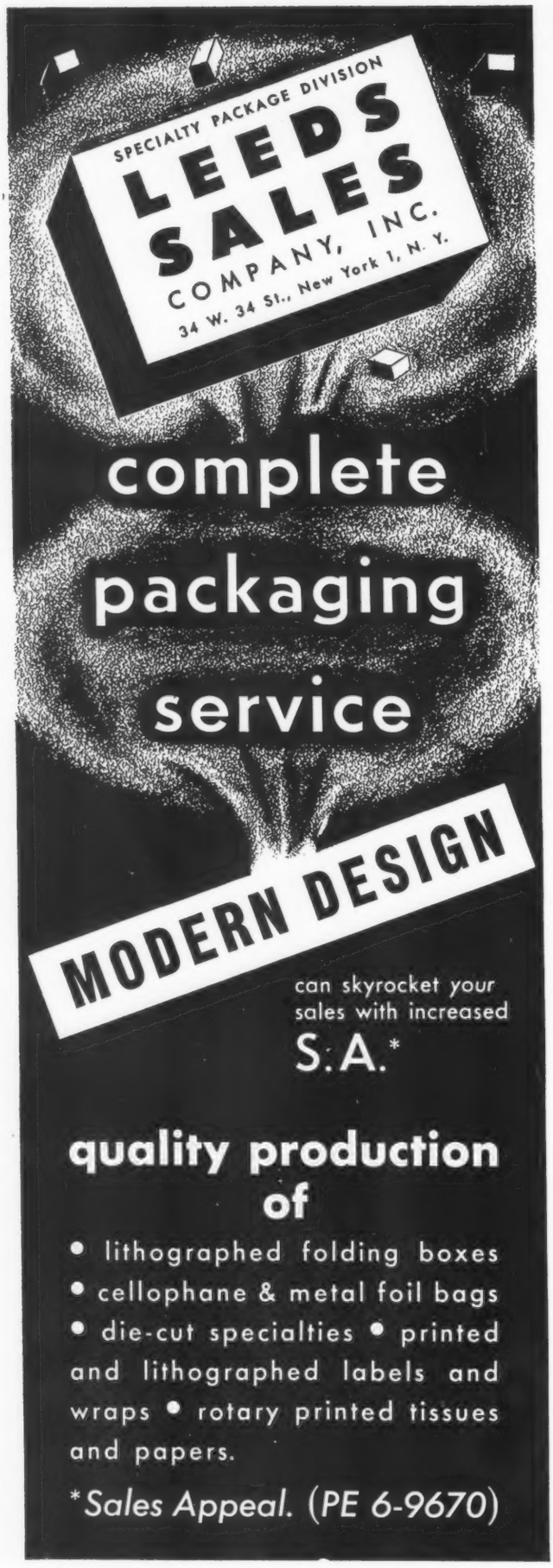
The popularity of these containers is growing . . . growing because their many advantages are basic. You sell more—need less selling time with products that are packed in glass containers—Duraglas Containers!

*Name supplied on request.

**Average is based on eight key classifications: pears, peaches, fruit salad and cocktail, baby food, coffee, salad or cooking oil, beets, food-beverages.

ESPECIALLY IN Duraglas **CONTAINERS**

OWENS-ILLINOIS GLASS COMPANY · TOLEDO 1, OHIO · *Branches in Principal Cities*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can skyrocket your sales with increased S.A.*
quality production of
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minute. Cartons in collapsed form fed from a magazine are expanded, bottom end closed by tucking in the end flat. The set-up cartons are carried along in pockets of a conveyor. The candy is fed from a hopper into a measuring device where the proper charge is accumulated and dropped into cartons as they travel by. The top of the carton is then closed and the cartons, completely filled, are ejected from the machine. The high speed of such machines, it is claimed, is due to two things: the cartons are carried along continuously by a moving conveyor that operates at varying speeds and there is no stop-and-start principle. The measuring cup travels along with the carton for a period so that filling time is increased yet there is no lost time.

Many machinery companies report that new equipment is being designed and some installations in the candy field may be ready by the end of the year. The orders ahead, however, do not make the immediate outlook for machinery too bright.

Nevertheless, candy manufacturers feel this is the time to plan for the better packages that will be seen in coming months and next year. All evidence points to a desire for much improved package quality.

CREDITS: *Troll wrap: laminated foil, Reynolds Metals Co., Richmond, Va.; printed by Milprint, Inc., Milwaukee, Wis.; Charms packages: foil materials, Reynolds Metals Co. Glassine wraps for Rittenhouse Peanut Chew, Quik-Snak Wafers, Walecco Peanut Bar and Charleston Chew, Nashua Gummed & Coated Paper Co., Nashua, N. H. D. Goldenberg Peanut Chews: designed by Frank Gianninolo, New York; Wrappers, Milprint, Inc.; display boxes, Royal Pioneer Paper Box Co. Philadelphia.*

Addendum

The article "Wrap-carton ... a New Kind of Package" in the March issue made the statement that "So far as is known, this is the first successful heat-sealed package for butter ever used commercially." The long memory of MODERN PACKAGING's editors didn't stretch far enough in this case. A reader points out that Frederick F. Lowenfels & Son, New York, introduced in, 1935, a heat-sealed pound package for their "Farm Squares" butter, using a waxed laminated outer wrapper made by the Paterson Parchment Paper Co.

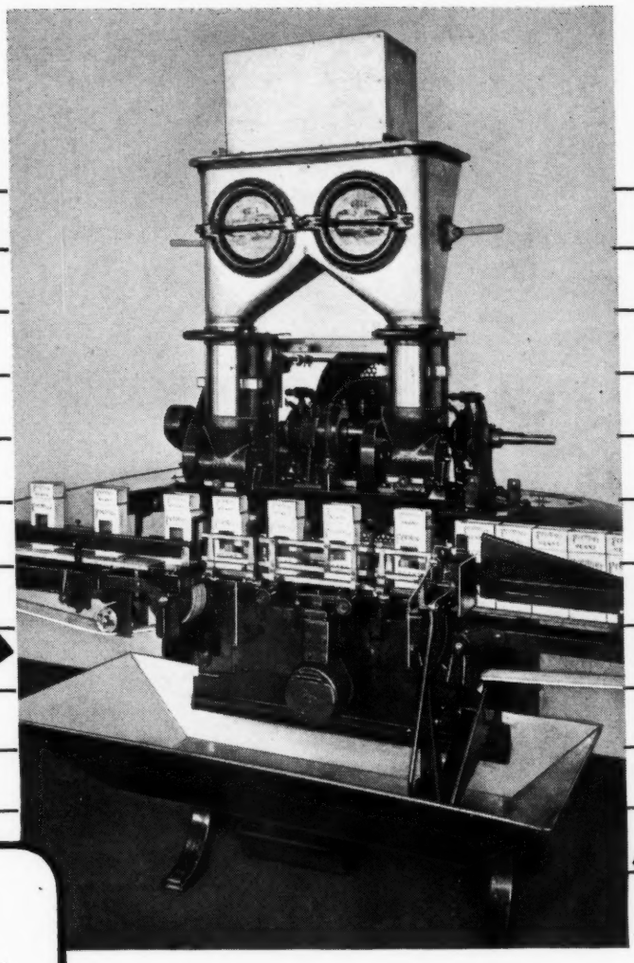
Dried fruit packaging

(*Continued from page 127*) raisins are simultaneously fed into the weighers until precisely 15 ounces accumulate, after which they are released into an assembly of hoppers mounted on a vertically operated carriage. The operation is so timed that when empty cartons are positioned directly below the lower gates (six at a time carried by conveyor) the assembly drops and the raisins are released. There is no spilling and operation is continuous.

Pioneered and tested in the Peloian plant, the development will undoubtedly influence other raisin packaging operations. Due to its remarkably precise timing features, which make possible fully automatic weighing operations, the machine will not function unless exactly 15 ounces can be released simultaneously from the

SEND YOUR PRODUCTION COSTS

DOWN



TWO SCALE GROSS WEIGHT WEIGHER

The Gross Weigher shown here is one of several models among which is a unit for handling most every type of non-abrasive product ranging from sticky brown sugar to free flowing rice. This type weigher operates at speeds ranging up to 35 per minute and is usually accurate to within 1/16 ounce. Ruggedly constructed and designed to perform with a particular product, it will operate with continual accuracy.

LOWER COST PER CONTAINER

WITH

PNEUMATIC WEIGHERS

For over fifty years Pneumatic weighers have been helping hundreds of producers throughout the world in their never ending task of keeping costs down. And in this period Pneumatic has accumulated invaluable experience and knowledge of the problems involved in handling practically all known types of materials, and developed exceptionally accurate methods of weighing them.

Beginning with the research work to be done on each order, down to the last assembly man checking out the machine for shipment, Pneumatic men have a crystal clear objective in mind of building a unit that will operate at "Lower Cost Per Container". This has grown to mean more than just an ideal, it has resulted in great savings in both time and money for many different companies.

PNEUMATIC SCALE CORPORATION, LTD., 82 Newport Ave., North Quincy 71, Massachusetts. Branch Offices in New York, N. Y.; San Francisco, California; Chicago, Illinois; Los Angeles, California.

PNEUMATIC **PACKAGING AND BOTTLING MACHINERY**

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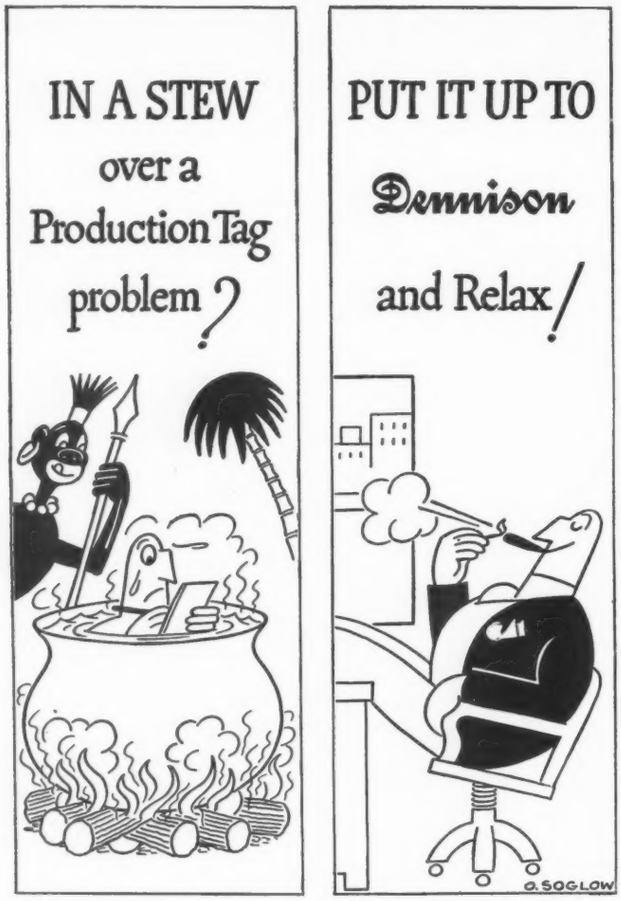

PROPERLY planned and integrated tags can do a lot to help you get back to top production on peacetime lines. If your present system is keeping you in hot water, why not decide right now to put the problem up to Dennison.

Dennison has been studying this subject for years. During this time we have helped develop modern, smooth-functioning tag systems for practically every industry and type of manufacturing operation. So don't hesitate to send us your problem because you feel it is "different."

Whether you are primarily interested in better tags for raw materials control—production routing and scheduling—inspection—shipping records or other phases of your plant operations, Dennison can offer you practical suggestions.

Remember, too, that you do not have to pay a premium price for experience and know-how when you put your problems up to

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weighers into carton-filling hoppers. Therefore, the uniform supply to the upper filling chambers being absolutely essential, it was necessary to devise a primary supply system which would keep them full.

Raisins are conveyed to the hopper from floor level by a wide belt. Excess raisins not deposited in the upper chambers of the weighers are pushed by the action of the spiral screw through an end opening, where they drop to a conveyor which returns them to the starting point.

The Peloian production line at present is geared to 80 packages per minute, with only six attendants. By adding one additional helper in the case-filling operation, the capacity may be doubled through the addition of a second production line. The only necessary manual operations in the present line are setting up and filling shipping cases and taking cases from the case sealer.

Typical of current trends toward simplicity of design, the Peloian "Pel-Pak" package—which is a side-folded, glued carton without overwrap—employs an over-all background color of tomato red, distinguished on identical front and back panels by large cross-shaped areas of white which carry a lithographed illustration of the product with informative copy in two shades of blue.

Sun-Maid Raisin Growers of California, Fresno, whose consumer carton output of the famous "Sun-Maid" brand is said to exceed the combined output of all other consumer-packaged brands, are reported to be considering a number of new packaging developments.

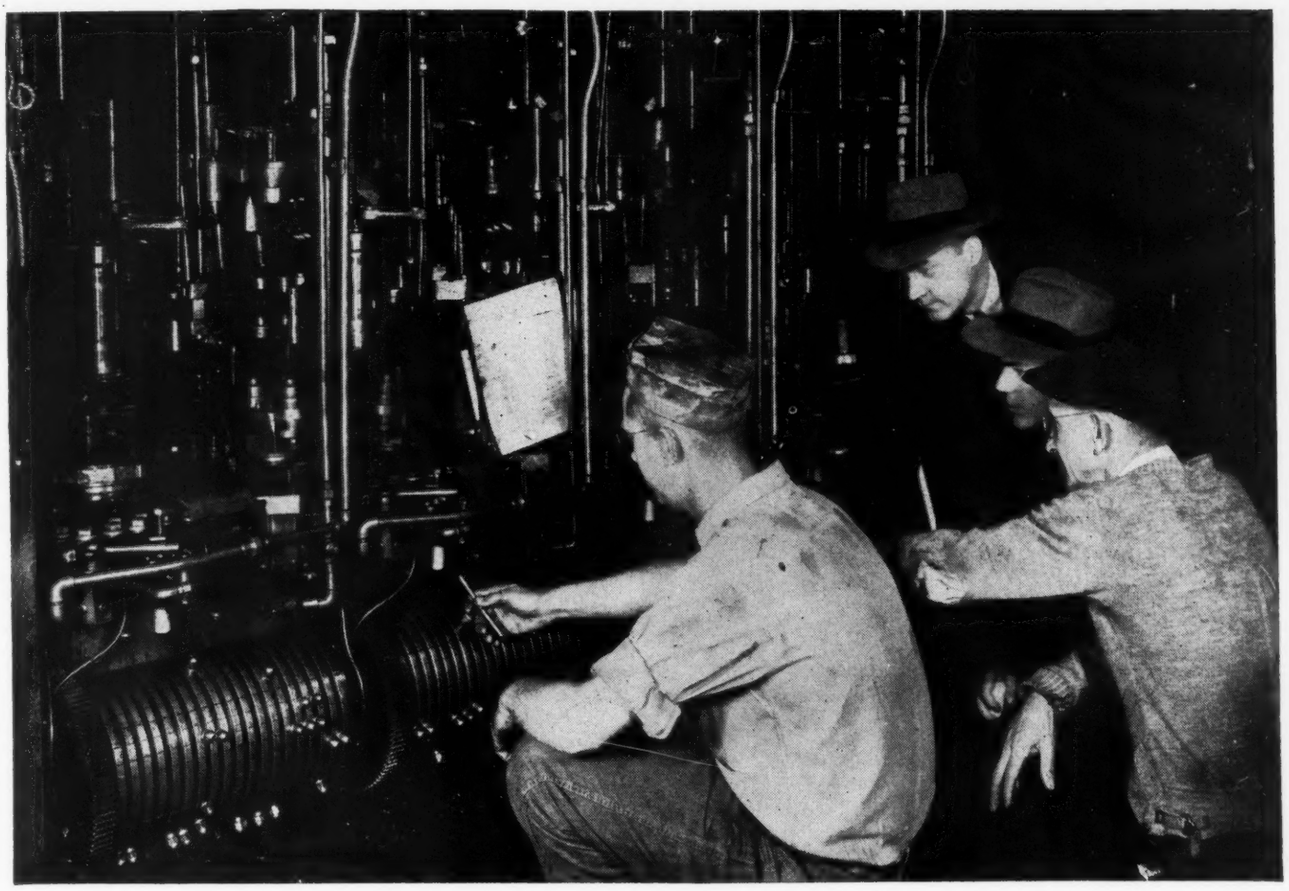
In the meantime, Sun-Maid is incorporating an important change in the present paperboard carton package. This is a moisture barrier in the form of an inside coating of high-melting-point paraffin wax to eliminate contact of the raisins with interior cardboard surfaces and to aid in preserving natural moisture content.

Involving approximately 2,000 tons annually, the entire packaging operation of the California Fig Growers & Packers, Inc., Fresno, is an outstanding one. With special emphasis on appearance, product protection and prolonged preservation of processing results, the firm has developed a package incorporating a glued carton of asphalt-filled laminated board and full overwrapped foil label for the fancy and extra fancy grades of its "Softenized" "Blue Ribbon" brand of Calimyrna figs.

Figs pose unique packaging problems. Due to a pronounced tendency of the processed fruit to sugar, to the fact that it must be allowed to breathe, and because after drying the skins tend to toughen, the functional requirements of the package are exacting.

Naturally thick skins of the dried fruit are broken down to a tender soft texture by means of "Softenizing," a cooking process involving only pure water and steam. Figs must be packaged cool in order to prevent them from continuing to cook in the insulated, foil-wrapped package, while prunes and raisins are packaged at processing temperatures as high as 160 deg. F. The fig package must be tight, although not tight enough to prevent breathing. Tests of the firm's foil-wrapped package are claimed to have revealed the fruit to be soft, edible and unsugared after a period of three years.

Filled cartons are wrapped and heat-sealed by an



"More ways to make a bottle than you can count"

You're watching Cy Robinson set the timing drum on a bottle-making machine in Armstrong's Millville, N. J., glass plant. Bill Herman, shift foreman, is giving a couple of Armstrong's salesmen an idea of the knowledge, training, and skill behind this operation.

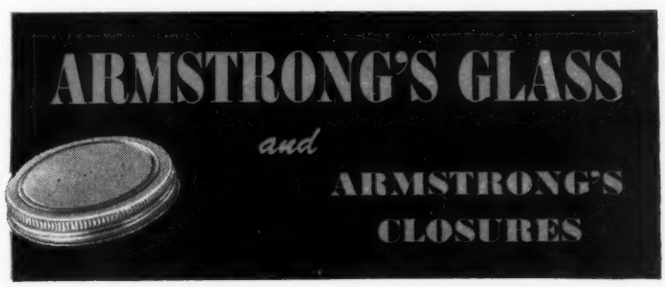
"Each of these timing drums," Bill is explaining, "consists of 19 rings. Each ring has 320 settings on it. Figured out mathematically, there are more ways to set the drum than you could ever possibly count!"

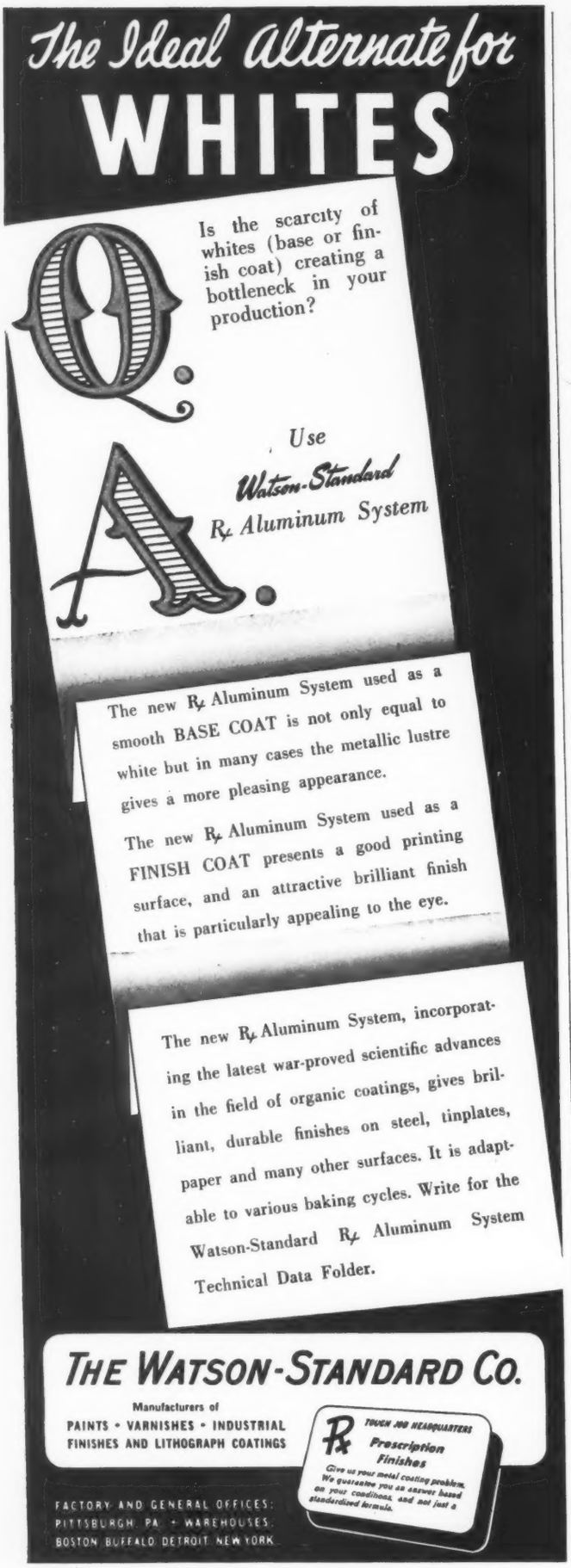
With such a tremendous number of settings possible, it is easy to understand why years of research and experience are required to arrive at the most efficient combination for each bottle. Many of the techniques involved in making top-quality glass are similarly complex.

It's easy to understand why everywhere they go in Armstrong's plants, Armstrong's salesmen find veteran workmen on the job. Men like Cy and Bill, who combine 53 years of glassmaking experience.

From these men, our salesmen get more than an insight into the fascinating difficulties of good glass and closure production. They acquire also practical, down-to-earth information that helps them do a better job of servicing your glass and closure needs.

For complete information about Armstrong's Glass and Closures, see your Armstrong's representative, or write direct to Armstrong Cork Company, Glass and Closure Division, 5909 Prince Street, Lancaster, Pennsylvania.

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automatic machine. An electric eye device activates the mechanism which cuts the wrappers from a roll.

During the coming year the California Fig Growers and Packers will introduce a new companion package featuring their top quality Blue Ribbon Calimyrna figs. This will be an 8-oz. open tray cellophane wrapped.

Die-cut and scored with a minimum waste of blank stock, the tray design incorporates a system of cuts and scores which permit automatic set-up without glue.

CREDITS: **Sunsweet packages**—*Foil-wrap by Reynolds Metals Co., Richmond, Va.; carton by Fibreboard Products, Inc., San Francisco; liner by Western Waxed Paper Division, Crown Zellerbach Corp., San Francisco; all machinery by Pneumatic Scale Corp., North Quincy, Mass.* **Saratoga packages**—*Double package maker and other equipment by Pneumatic Scale; case sealers by J. L. Ferguson Co., Joliet, Ill.; labels by Muirson Label Co., Inc., San Jose, Calif.; box blanks by Fibreboard Products.* **Richmond-Chase packages**—*By Shellmar Products Corp., Mt. Vernon, Ohio.* **Plump and Meaty packages**—*Flav-o-tainer bags by Thomas M. Royal & Co., Philadelphia; heat sealers by Wrap-Ade Machine Co., Newark, N. J.; cartons by Fibreboard Products.* **Pel-Pak packages**—*Automatic weigher and filler by Pneumatic Scale; cartons by Fibreboard Products, printed by Fibreboard and by Schmidt Lithograph Co., San Francisco.* **Sun-Maid packages**—*Cartons by Fibreboard Products.* **Blue Ribbon packages**—*Label-wraps by Milprint, Inc., Milwaukee, and Reynolds Metals Co.; wrapping and heatsealing machine by Johnson Automatic Sealer Co., Ltd., Battle Creek, Mich.*

Pi standard test methods

(*Continued from page 151*) been properly aged, they are ready to be tested. The free ends of the sample are anchored in the two clamps, taking care to see that the sample is lined up parallel to the clamps. (See Fig. 4.) The pull on the seal is started and the highest reading from the proper scale is recorded.

B. Exceptions

(1) Any newly developed material which has not been previously tested is aged for at least a week under high and low humidity at 100 deg. F. before conducting any tests.

(2) Some materials are subjected to high humidity at 100 deg. F. after they have been sealed at their optimum sealing temperature. Twenty-five sealed portions are subjected to these conditions, five being removed and the seals tested each week.

7. Calculations

The readings in grams or pounds per inch for each set of samples are averaged.

8. Precision and reproducibility

To consider the results comparable, the values for a set must agree within ±10. If the deviation is greater, another set of five samples is run at that temperature.

9. Report

The strength in grams or pounds per inch of the seal is reported along with the temperature at which the seal was made and the dwell time of the sealing jaws. Any aging time other than the normal hour's aging is

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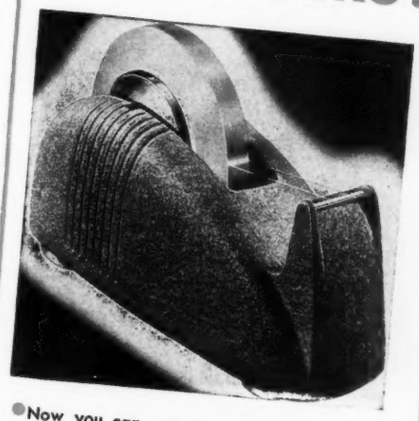

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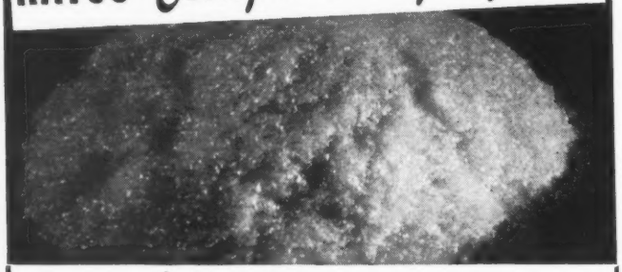

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Coating with spangles adds a touch of sales magic. The eye-appeal is tremendous. Use like flock on

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Developers and Producers of Cotton Fillers for Plastics

to be specified. If slipsheets are used, they must be mentioned, also mention the type of jaws used on making the seals—"flat metal-to-metal jaws," etc. Tests are to be run only using smooth metal jaws without any corrugations or irregularities of any kind. Crimp or corrugated jaws do not give results directly attributable to the heat-sealability character of the material but may reflect the ability of the material to crimp or adhere mechanically.

In many cases, it will be helpful if a graph is drawn using seal strength as the ordinate and temperature of sealing as the abscissa. This will be of help in making recommendations as to the working range of the material. Obviously, it is more important to have a material with a long sealing range of uniform strength than one which is characterized by a narrow sealing range of very high seal strength.

10. Interpretation of results

For many purposes it is important to report the type of failure which occurs when the specimen has been tested. In the case of thermoplastic or plastic sheetings, failure may not occur at the sealed portions and may be identical with tensile strength of the specimen.

In the case of surface coatings, destruction of the seal may occur with peeling of the coating and no change in the base material. In the case of compound laminated structures, any one of the plies may break and peel in various ways.

11. Remarks

A. It is desirable with thermoplastic films to test the sealing characteristics of each side to itself and one side to the other. However, if only one combination can be run, it is best to seal one side to the other.

B. With any paper structure look for a tear of the sheet fibres—this indicates an excellent seal.

C. Care must be taken to have all coatings properly dried before conducting a heat-sealing test.

D. If the mass of a thermoplastic coating is great, the pressure used in making the seal cannot be too great since there will be a tendency to squeeze the thermoplastic material away from the seal.

E. If a satisfactory seal is made, the depth of the seal is usually an unimportant factor but seals of various depths should be tried.

12. References

(1) TAPPI, *Testing Methods, Recommended Practices. Specifications,* T-404m-41.

Cosmetics . . .

(*Continued from page 103*) be very convenient and useful to the recipient as a purse-size bottle (Fig. 25). The entire bottle and glass stopper is fired in 23-karat gold and is hand polished, a treatment that may be given to any bottle by a number of small firms who do this work. The label is printed foil. The bottle is set in a platform made of flocked cardboard. The

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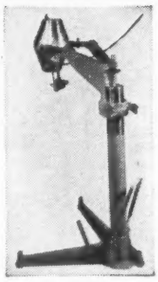
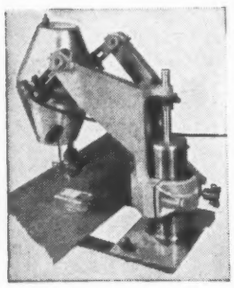


9-C—Portable pedestal model stands on the floor alongside machine or conveyor handling products to be marked. Markomatic switch immediately synchronizes marking operation with flow of products. Markomatic 9C is adjustable in three planes to mark a variety of packages. Unit is portable for marking operation in different locations. Stand 50" high, occupies 16" x 28" floor space.



9-B—Different from floor model, this Markomatic mounts on the machine. Also adjustable to mark a variety of packages.

Both 9B and 9C have a handwheel to quickly raise or lower head into marking position. No tools required.

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base is foil covered and the cover is black and gold.

New children's cosmetics are still appearing on the market. One that is for children between two and twelve called "Miss Twinkle" is simply but whimsically packaged with a cartoon head of a little girl in blue on a white background embellished with stars. A fuschia ribbon bow gives the contrasting color note. Color is applied directly to the bottle (Fig. 21).

A famous fragrance that has blossomed forth in new dress is Djer Kiss. The new packages feature a romantic couple in Empire costumes, but treatment is very modern. Colors are white, green and gold (Fig. 26). Vivaudou also enters the holiday season with a large collection of Djer Kiss and Mavis Christmas sets.

The idea of a transparent plastic cap that fits flush with a cylindrical bottle is not new—but it is new when the material is a soft transparent blue cast phenolic as it is for "Blue Fox" cologne—a new item this fall. The Blue Fox idea is also carried out in the design for a wrapper of the package. By using this wrapper on a protective chipboard box, Miahati, Inc. who makes this product, has been able to solve some of the still troublesome paper shortages (Fig. 24).

All the pent-up desires of four years of war are released in the planning of this year's cosmetics for a public that is just as eager for the beautiful, the ellaborate, the whimsical and the daring.

CREDITS: **Forever Amber**—*container: designer, McStay Jackson Co., Chicago; produced by Design Fabricators, Inc., Chicago.* **Matchabelli**—*Crown Jewel container: material, Du Pont Lucite; designer, J. P. Sawyer, New York; engineered and produced by Industrial Conversions, Inc., New York; set-up box, McClintock-Leigh Corp., Hackensack, N. J. Crown Duet box, The Warner Bros. Co., Bridgeport, Conn. Christmas bell, Chase Brass & Copper Co., Waterbury, Conn.* **Helena Rubinstein**—*polystyrene bell: designer, Victor Silson, New York. Holly wreath: material, cellulose acetate sheet, Eastman Kodak Co., Rochester, N. Y.; fabricator, Heminway Corp., Waterbury, Conn.* **Gloria Vanderbilt**—*"Diamant Bleu" wrap, J. Makowsky Corp., New York; boxes, Makdon Corp., New York. Toiletries line: glass containers, T. C. Wheaton Co., Millville, N. J.* **Milo perfumes**—*designer, Josef Karov, New York; boxes, Kenhue Paper Box Co., Newark, N. J.; glass containers, Glass Industries, Inc., New York.* **Dorothy Gray** *"In the Pink"—designer, Dorothy Draper, Inc., New York; cover papers and labels, C. H. Forsman Co., New York; boxes, Bartold Schang, Inc., New York; bottles, Swindell Bros., Inc., Baltimore, Md.* **Herb Farm Shop**—*acetate box, London Shop package and Carousel, Shaw Randall Co., Pawtucket, R. I. Men's line set: box, Cambridge Paper Box Co., Cambridge, Mass.; bottles, T. C. Wheaton Co., Millville, N. J.; brass closure with plastic insert, Richford Corp., New York; fibre talc container, Cross Paper Products Corp., New York; foil labels, The Foxon Co., Providence, R. I. Culinery package: baskets, American Basket Co., New York, and Fred Leighton, Inc., New York.* **Marie Earle**—*fitted bag, Colt-Cromwell Co., Inc., Boston, Mass.* **Primrose House**—*wraps and paper labels, Addison Lithographing Co., Rochester, N. Y.; printing on glass, Anigraphic Process Co., New York.* **Miss Twinkle**—*designer, Sarah Little, New York; bottles with applied color, T. C. Wheaton Co., Millville, N. J.; caps, Owens-Illinois Glass Co., Toledo, Ohio; boxes, Henry Paper Box Co., Brooklyn, N. Y.* **Djer Kiss**—*designer, Lester Gaba, New York.* **Blue Fox**—*closure, cast phenolic, Catalin Corp., New York; printing on glass, Creative Printmakers Group, New York; wrapper, Knickerbocker Printers, New York.* **Prince Obelinsky**—*container, molder, Tri-United Plastic Corp., Irvington, N. J.; printed by Modern Decorating, Union City, N. J.*

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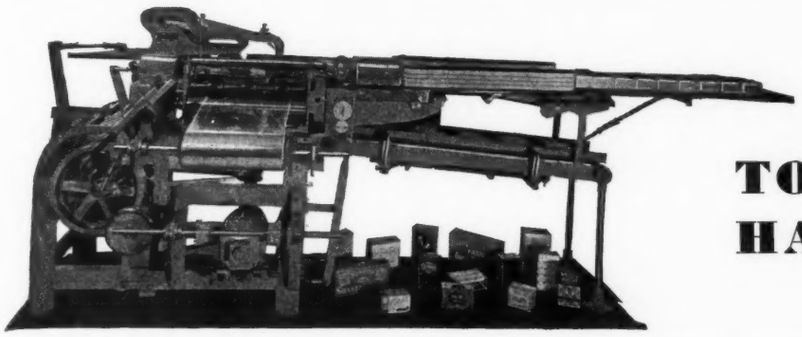

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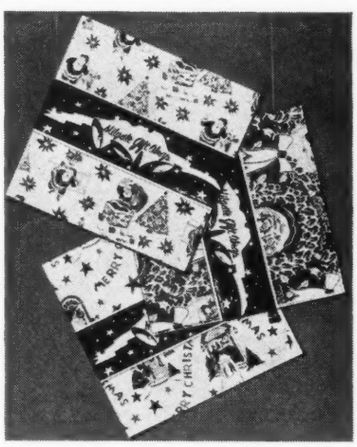

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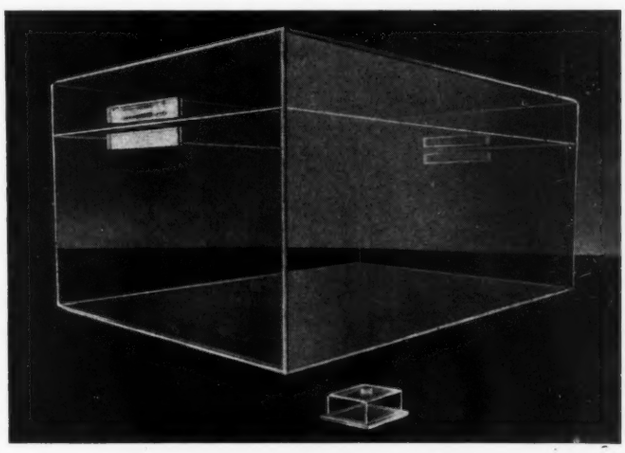

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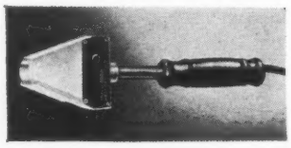

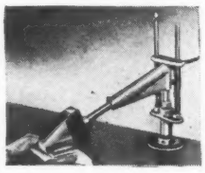

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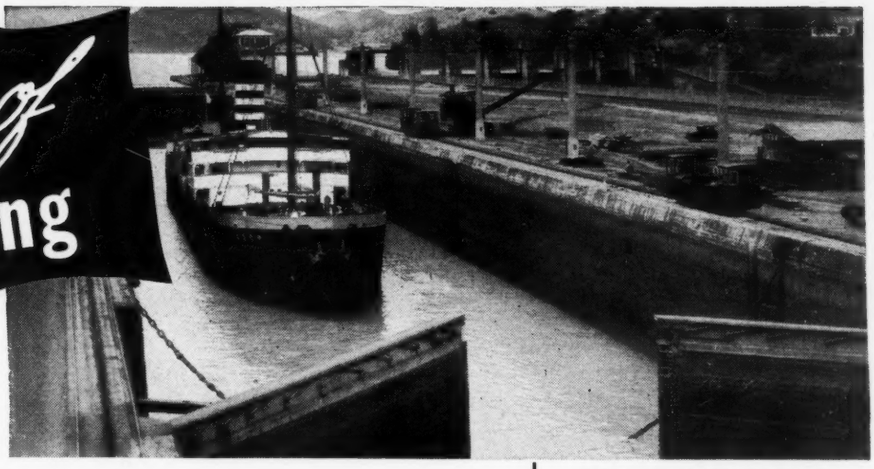

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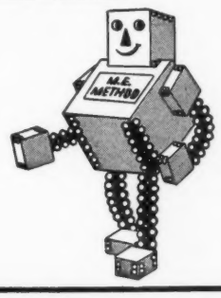

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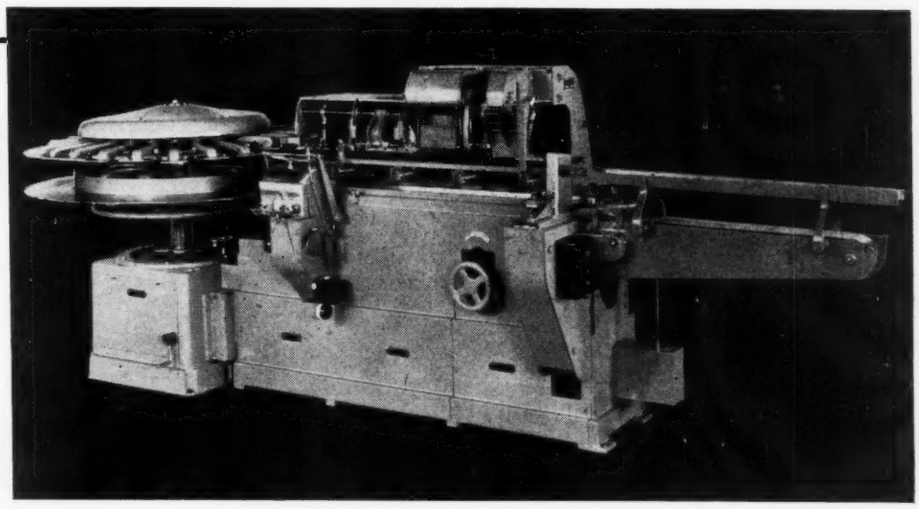

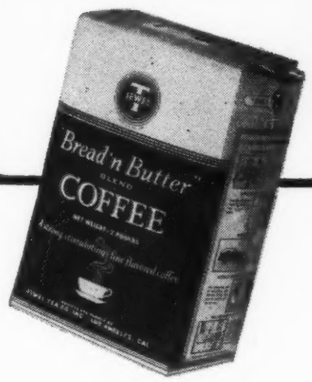

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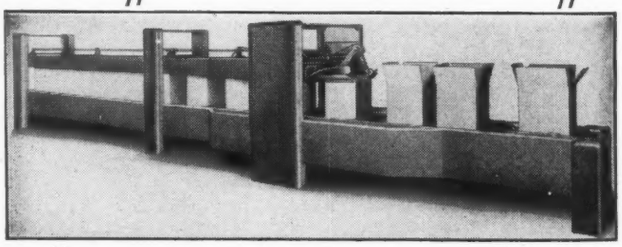

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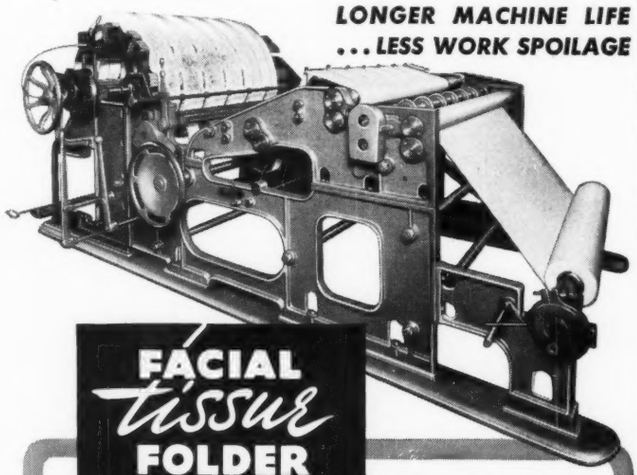

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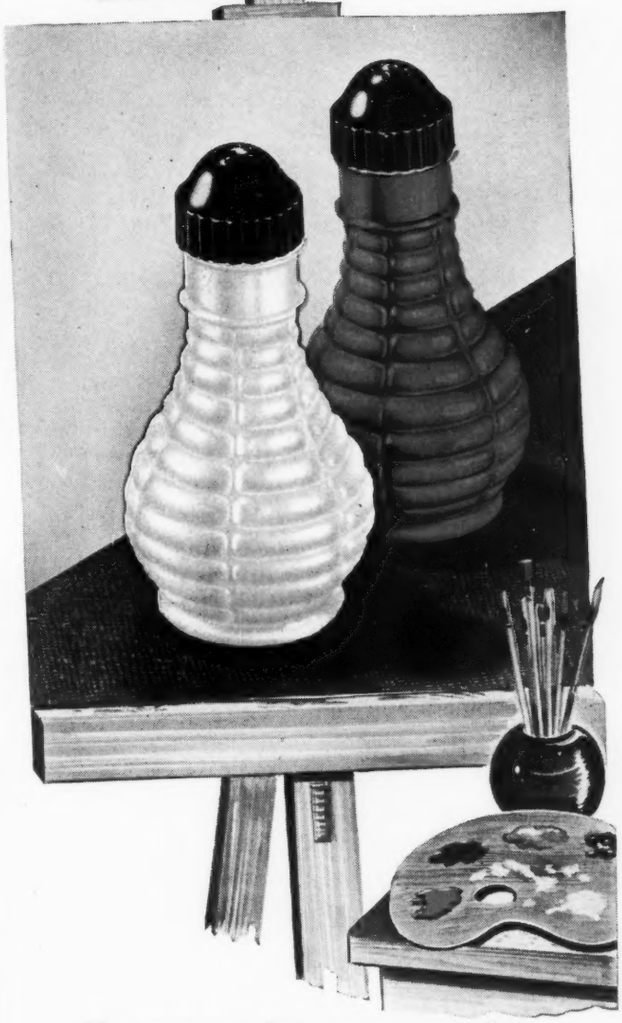

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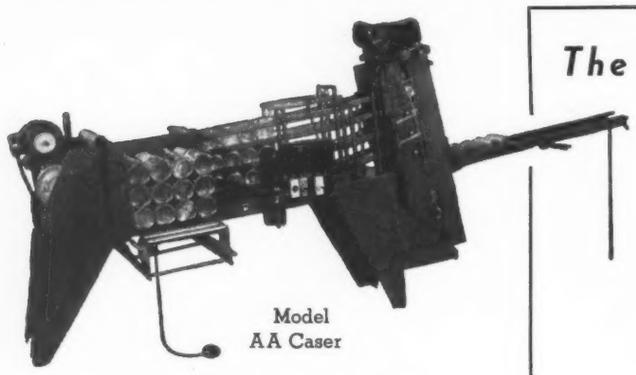

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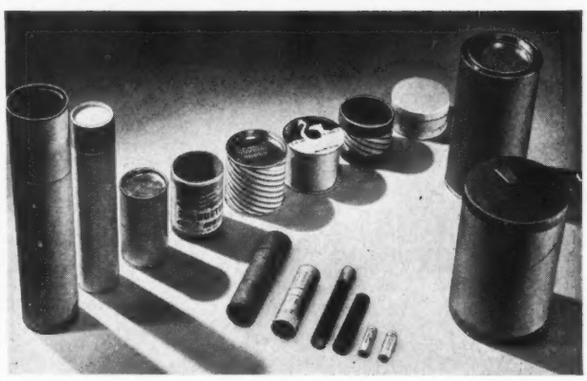

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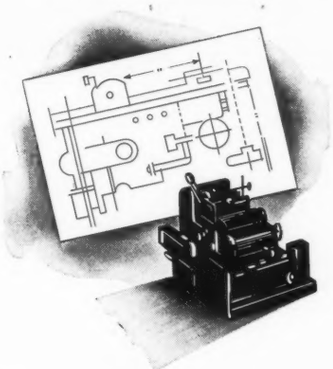

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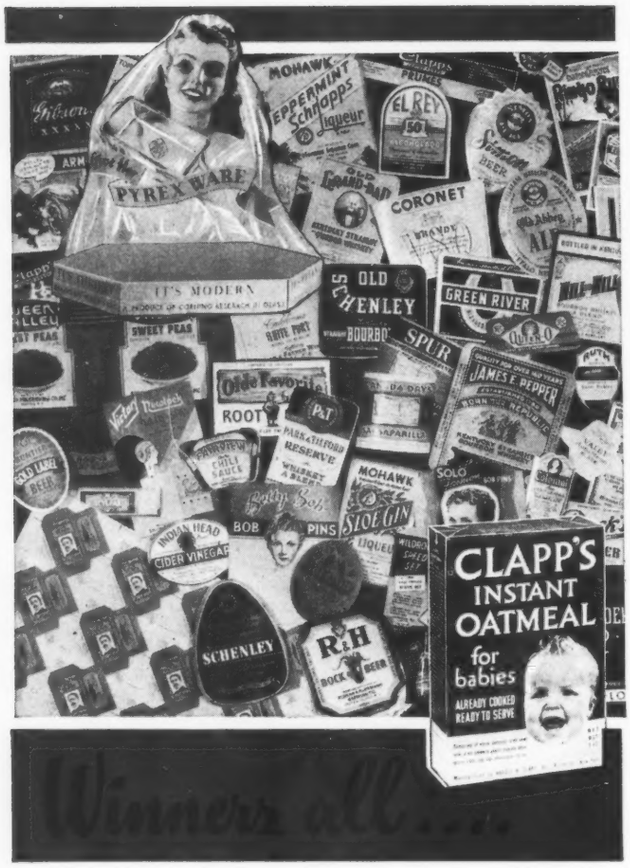

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To give your package or display the brilliancy that invites sales, colors are matched with spectrum analysis. Die-cut wrappers are projector-tested to assure uniformity and trouble-free operation of your packaging machinery.

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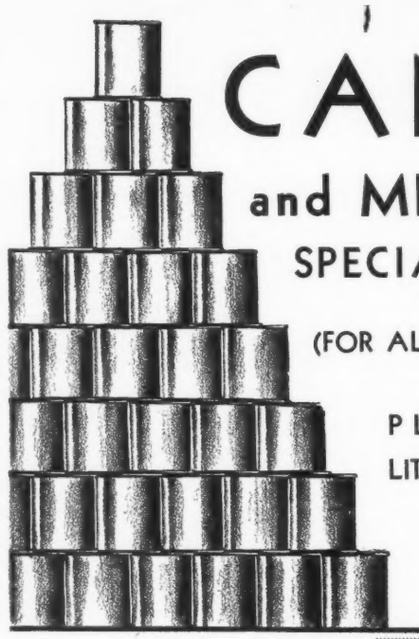

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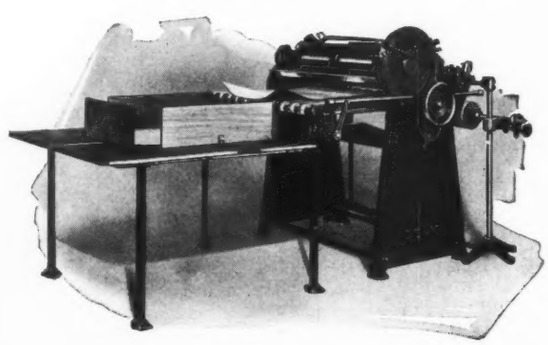
ARE YOU EQUIPPED to meet RE-CONVERSION and its acutely keener competition?

BECK SHEETERS designed and built for the mastery of accuracy and low costs, possible only through their dependable and automatic operation: these can be the unfailing answer to your needs.

Equipped with **ELECTRIC-EYE** and **SHEET-PILER** with AUTOMATIC LOWERING TABLE represents the latest in high production, automatic sheeting work.



CHARLES BECK MACHINE CO.

13th & Callowhill Streets Philadelphia, Pa.

You mean— an empty bottle might solve my labeling problems?

. . . THEY ASK

TIME AND AGAIN IT HAS HAPPENED. A manufacturer is planning next year's line. But the package shape is tricky, unusual. Question is: How to handle the labeling, dovetail it with other production facilities... efficiently, at lowest cost.

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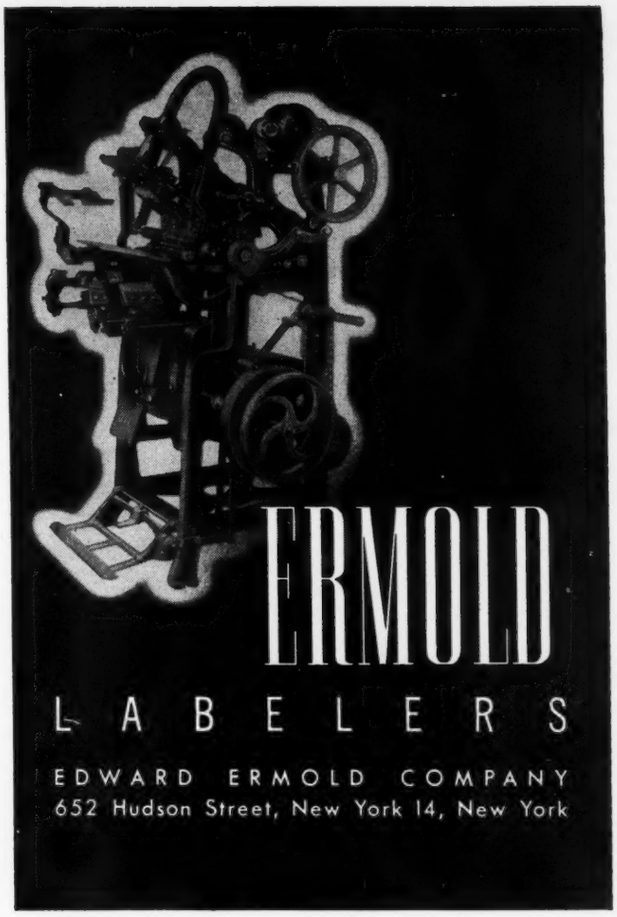
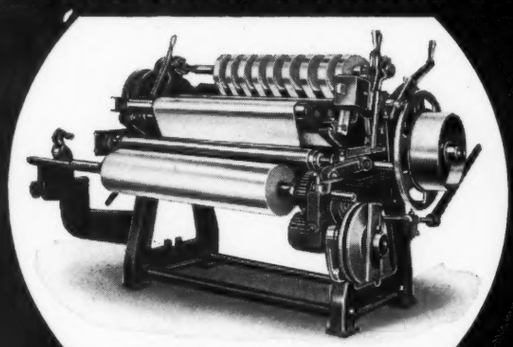
We've been making labelers—and studying labeling problems—for over 65 years. Draw on this experience. It can supply the *right* answer to practically any labeling question.



FOR COMPACT, CLEAN-CUT ROLLS OF CELLOPHANE, SYLPHRAP, ETC.



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Camachine 24-7 is a slitting and roll-winding machine for Cellophane and similar transparent materials, especially designed to overcome the difficulties peculiar to handling such products. The delicacy of the material and its lack of uniformity in thickness necessitate extra care in handling, which is provided for in this machine. The end result is a distinctly better roll that brings more economical and satisfactory performance in the later process of packaging. Operation is simple and requires no skill.

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WRITE, PHONE or WIRE for Quotations on Your Requirements for

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That's especially true of fine merchandise packed in our

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We specialize in boxes, cans and counter display packages made of transparent acetate. If you have a particular plastics packaging problem that requires unusual treatment, we are at your service.

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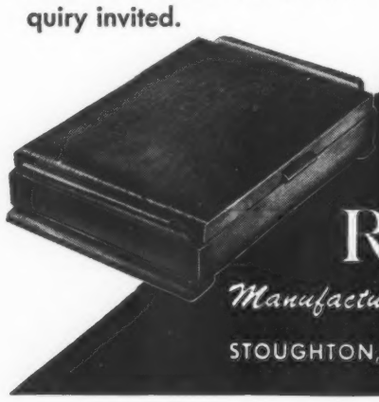

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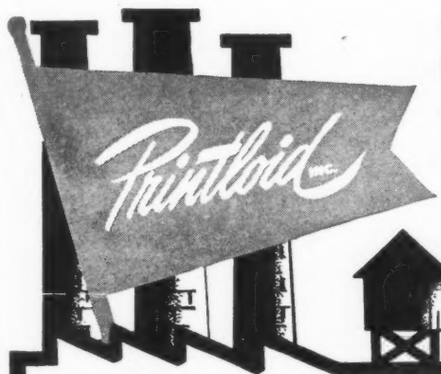
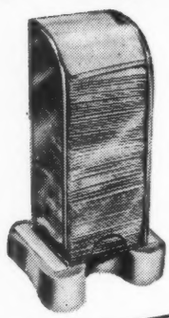


complete plastic display fabrication

"ALL UNDER ONE ROOF"



This gauze pad dispenser, made for one of the leading surgical supply houses, illustrates one of the many unusual plastic display assignments executed by Printloid.

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Printloid INC.

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DEPT. MP

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Cut Down Your Packaging and Shipping Costs — *Ship Us*

Your Product IN BULK!

WE'LL ASSEMBLE, PACKAGE and SHIP IT FOR YOU!

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Facilities— Railroad, express, parcel post and motor facilities right at our doors—for fast service when and where you want it.

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Packaging— Protective packaging of all kinds—according to your most exacting specifications.

This fast, reliable service REDUCES FREIGHT WEIGHTS and FREIGHT SPACE, AND SO, of course, FREIGHT CHARGES. Equipped to handle most any type of product—the assembling, bottling, packaging and shipping of it—yes, you can even send us tank-cars of wine, olive oil, etc. Just tell us your needs—we'll IMMEDIATELY send you a COST-CUTTING PLAN that will be a revelation to you.

PACKAGING & SHIPPING SERVICE, INC.
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PLAN ON USING A TRANSPARENT PLASTIC BOX FOR YOUR SPRING LINE!

This attention-getting re-usable style of a container is making sales records in many fields from candy to cosmetics.

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Send for samples and prices

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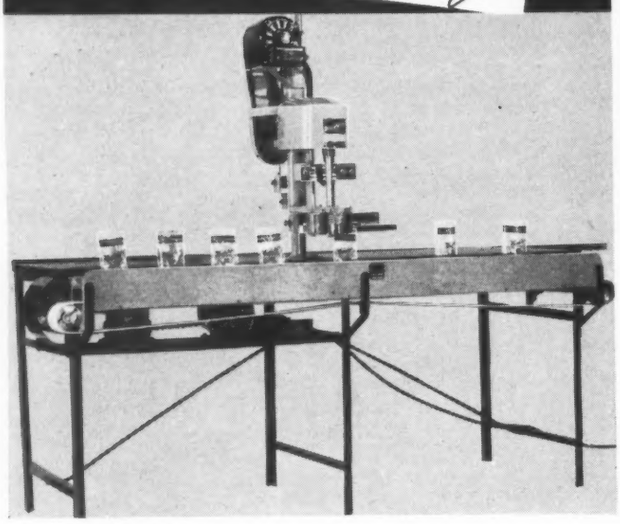
WAlker 5-5473

THE DOUGHBOY CONVEYOR TABLE INCREASED OUR PRODUCTION 30%

The Doughboy Conveyor Table in conjunction with the Doughboy Rotary Sealer has lessened our task, and our production has increased 30%.
RED DOT FOODS, Inc.
A. B. Laing



The Doughboy Conveyor Table used in conjunction with the Doughboy Rotary Sealer has increased the production of the Red Dot Foods, Inc., by 30%. It can do it for you, too.

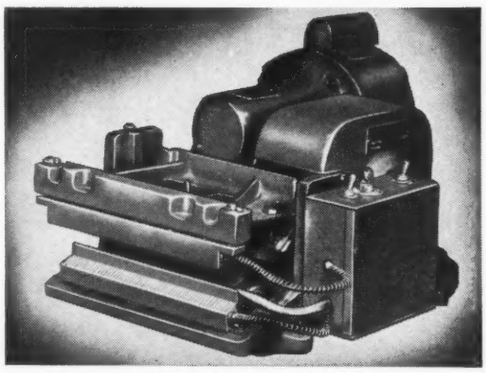
Specifications for the Doughboy Conveyor Table: 24″ x 72″; all steel frame; plywood top; conveyor belt synchronized to the speed of the sealer. Together with the Doughboy Sealer they are capable of sealing up to 21,000 bags per 8-hour day.

The Doughboy Rotary Sealer Model 46 will seal all materials that can be sealed with heat and pressure. The new spring tension mechanism insures uniform pressure on all thicknesses passing through the machine.

Doughboy Conveyor Table—Model 046A
$165 F.O.B. New Richmond, Wisconsin
Doughboy Rotary Sealer—Model 46
$250 F.O.B. New Richmond, Wisconsin

Doughboy Industries, Inc.
MACHINES DIVISION
NEW RICHMOND, WISCONSIN

Heat Sealer



Wrapade automatic and semi-automatic heat seal machine handles foils, cellophane and other heat-sealed materials. It applies correct amount of heat and pressure in proper time cycle to make secure and lasting seal. Can be operated with perfect efficiency by unskilled labor. Applies uniform pressure, resulting in sift-proof, tamper-proof, dust-proof and sanitary packages without glue or staples.
Saves its own cost in bag size, staples, glue, etc.
Call or write for immediate delivery.
Now in use by many leading packagers.

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MACHINE COMPANY, INC.
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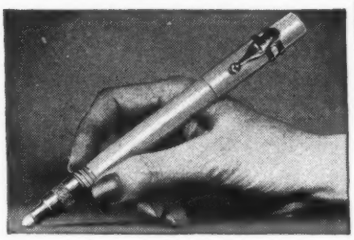
Telephone: NEvins 8-8052-3

THE CADO FLO-MASTER

Writes • Draws • Marks
on Any Surface



THE packaging industry has adopted FLO-MASTER as a help in the designing room, in the factory, in the shipping department. FLO-MASTER speeds up operations, writes, draws, marks thin, medium or broad lines on paper, cellophane, wax, fabric, metal or *any* other hard to mark surface. Valve controlled. All Aluminum. Leakproof. Safe to carry in your pocket. *Perfect legibility*. FLO-DRI Inks (black and colors) dry instantly. Ask for FLO-MASTER from your supplier or write us for details now.

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CONSOLIDATED PRODUCTS CO., INC.
16-20 Park Row New York 7, N. Y.

PACKAGING PLANT, extensive modern machinery, will custom pack your product for NW territory. Trackage, receiving, shipping, billing, 3 carload refrigerators. 24 inch assembly or sorting conveyor. Cello wrapping. Cello bagging. Labelling. Continuous monorail basket cooking in syrup. Vegetable wash and tray pack or bag. Confections cook and package in which we specialize. Complete premium deal servicing. Cayol Foods, 626—3rd Ave. No., Minneapolis, Minn.

WANTED: Brightwood Box Forming Machine, either bottom or top feed. Box 437, Modern Packaging.

WANTED a man as Superintendent of Cellophane Converting plant. Must be experienced in both gravure and aniline printing. Working conditions best possible in a new modern building. All new equipment. Box 438, Modern Packaging.

TWO EXCELLENT OPPORTUNITIES IN EXPANDING PAPER PLANT

Positions of assistant power plant superintendent and bag machine designer open in expanding pulp and paper operation in Southeast. Qualifications:

Asst. Power Plant Supt.—Approximately 35 years of age, graduate in mechanical and electrical engineering, supervisory experience in power plant. Prefer Southerner or person with considerable residence in South.

Bag Machine Designer—30 to 45 years of age, four or more years experience in designing small automatic equipment, ability to perform individual design assignments, well-proportioned sense of cost and practicability of design.

Salaries are commensurate with experience and ability. Give full particulars in first letter. Replies held confidential. Box No. 439, Modern Packaging.

TOP SALESMAN with top accounts desires to represent top company packaging field. All accounts guaranteed substantial. Recently discharged vet. Box 440, Modern Packaging.

OPPORTUNITY for an Engineer with 10 years experience in metal cap development work. Large manufacturer in small city of eastern Pennsylvania. Write full details to Box 441, Modern Packaging.

POWDER FILLING MACHINERY WANTED—Fully automatic filling and sealing machine to fill and seal cartons 6 x 2 x 8 with free flowing powder. Wanted for immediate delivery. Box 444, Modern Packaging.

WANTED SALESMAN to handle cellophane converting products for food industry in Southern States. Box 443, Modern Packaging.

WANTED Smithe S. O. Seed Pocket Machine. Please give full particulars, price and submit few samples of seed pockets produced on machine offered. Box 445, Modern Packaging.

REPRESENTATION FOR GREAT BRITAIN. Have you any products or ideas suitable for development in this market? London Sales Executive with over 20 years successful experience home and colonial markets, handling foils—paper—film and kindred materials for packaging—closure—display—novelty and like requirements, is prepared to offer energetic sales collaboration to progressive manufacturers. Box 446, Modern Packaging.

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INVITE tooth powder or like dentifrice manufacturer to participate in new and novel packaging and distribution plan. Box 447, Modern Packaging.

SALES ORGANIZATION controls large volume printed cellophane business seeking printer and bag converter with production facilities available for sub-contracting. Box 448, Modern Packaging.

SALES MANAGER
OPPORTUNITY

Excellent ground floor opportunity with established middlewest national manufacturer newly entering packaging field with acquired proven high-speed lines. Must have executive sales ability, successful record, engineering background and know thoroughly high speed packaging equipment and market. Remuneration commensurate. Replies confidential. Box No. 449, Modern Packaging.

PRODUCTION MANAGER—Thoroughly experienced in production and production problems. Ten years administrative experience in organizing and directing personnel; 29 months overseas, as director of Materiel, and Liaison representative between government and private operations for large war industry. Presently employed as production manager large paper box manufacturer. References both private and government sources. Require and can justify substantial income. Box 450, Modern Packaging.

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1. **One 12 spout straight line semi-automatic vacuum liquid filler, speed up to 72 bottles per minute. Capacity ½ oz. to 1 gallon, light, heavy, or foaming liquids.**
2. **One N. J. Pony Labelrite 86 M semi-automatic labeling machine.**
3. **One Elgin 6 head fully automatic capping machine. Adjustable speeds, from 1500 to 3000 C. T. Caps per hour.**

ALL MACHINES IN EXCELLENT CONDITION
PRINCIPALS ONLY

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PACKAGING SALESMAN WANTED for beautifully fabricated line of plastic packages, to set up and direct sales and merchandising dept. Previous Packaging experience important. Salary open. Write Box 451, Modern Packaging.

WANTED—New England representative with thorough background in drug and cosmetic trade to handle product of a major collapsible tube and molded closure organization. In reply give full details of background and present representation. Box 452, Modern Packaging.

FOR SALE: Brand new Doughboy heat sealer with preheater—Moderate price. Box 453, Modern Packaging.

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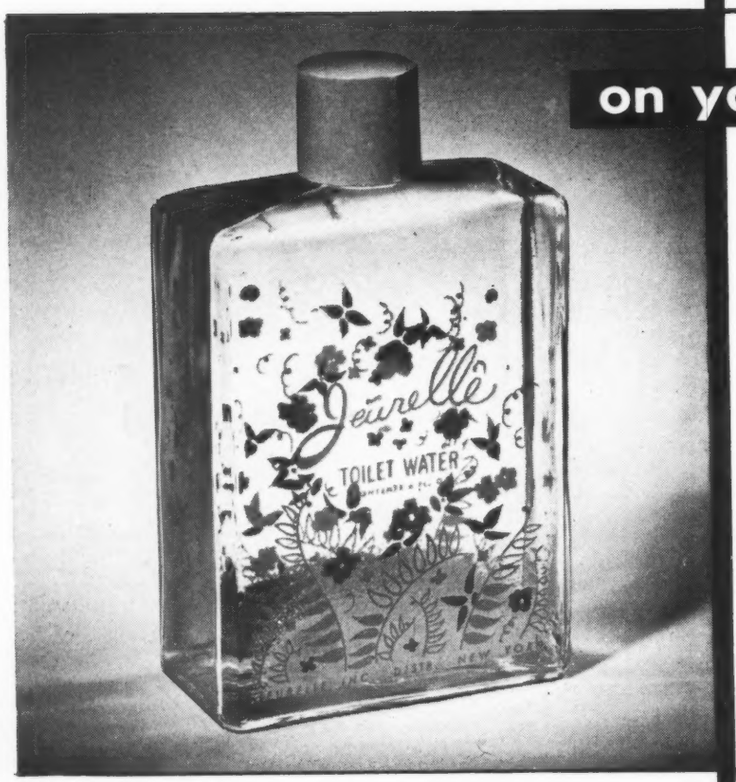
FOLDING CARTON SALES EXECUTIVE. Broad experience all phases promotional work. Will consider management capacity or direct sales preferably with integrated operation. Following. Box 454, Modern Packaging.

WANTED—Engineer with considerable experience in the Packaging Machinery Field. Manufacturing firm in the middle west has interesting responsible job for proper man to do contact work with makers of Packaging Machinery on Development Basis. Box 456, Modern Packaging.

Creative DECORATION



on your package

Emphasizes transparency

Lends distinction

Helps sell the product

Specialists in printing and decorating glass and plastics packages. We are equipped to handle your decorating in any quantity.

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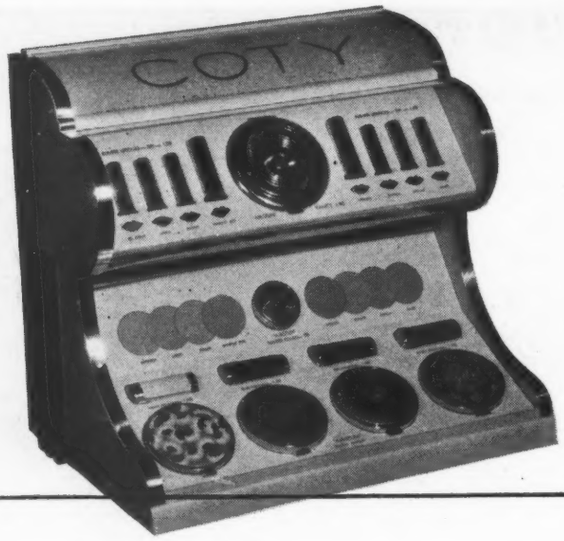
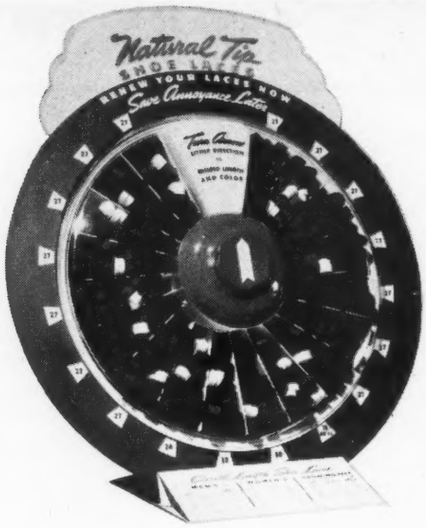
MODERN PACKAGING

Published by Modern Packaging Corp.

122 East 42nd Street New York 17, N. Y.





displays that get displayed ...use VUEPAK

Open secret of many merchandising successes has been the ability to get the product *plenty of display* . . . continuous, up front, counter display . . . where store traffic flows, where the money changes hands, where the buying impulse is at its peak.

It's been proved, too, that nothing excels Vuepak, Monsanto's beautiful, transparent, rigid packaging material . . . for displays that truly *display*. Top designers, leading manufacturers, and merchandisers have found that Vuepak lends itself beautifully to their creative ideas, gets enthusiastic retailer co-operation, sells their goods while it protects them. Also, Vuepak cases are economical at the same time as they're luxurious; they're easy and safe to pack and transport.

If you're looking for more display, more retailer enthusiasm, more prestige . . . MORE SALES . . . look into Vuepak for counter displays. Your display department or supplier can give you details . . . or write direct to MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Mass. In Canada, Monsanto Ltd., Montreal, Toronto, Vancouver.

Questions and Answers on Vuepak

1. **What is Vuepak?**
   Vuepak is a transparent, tough, rigid, beautiful Monsanto cellulose acetate.
2. **In what forms is Vuepak available?**
   In sheets up to 30" wide, and in continuous rolls 30" wide up to 1000 ft. long, in thicknesses up to .015". Available in .020" thickness in rolls with unit finish or in 20" x 50" press polished sheets.
3. **In what thicknesses is it ordinarily available?**
   In six standard gauges 0.005" to 0.020".
4. **Does sunlight affect it?**
   No.
5. **Is it affected by heat?**
   Not under ordinary temperatures. It begins to soften after 200° F. Underwriters' Laboratories classification, "slow burning."
6. **How can it be fabricated?**
   It can be drawn, shaped, formed or folded into almost any shape with inexpensive dies. It can be embossed, stapled, printed, cemented, or combined with other materials.

Vuepak: Reg. U.S. Pat. Off.

MONSANTO PLASTICS
SERVING INDUSTRY...WHICH SERVES MANKIND

VUEPAK
TRANSPARENT PACKAGING MATERIAL

TAKE A PEEK AT PROFITS

"It's revealing!" That's what the man who has been packaging in glass has to say, and he intends a double meaning. Glass has revealed his product to new millions of users by giving it an individual show window as it competes for attention on the dealer's shelf. That's one meaning...Here's another. Briefly, that individual show window has meant increased sales volume...It is practical and economical to package in glass for today's glass container has toughness, light weight, and selling power.

● A cap designed by ARIDOR provides easy sealing, resealing, and adds to package appeal. Have an individualized cap design created by ARIDOR exclusively for your package.

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